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THE
BOTANICAL REGISTER:

CONSISTING OF

Coloured Figures

OF

EXOTIC PLANTS,

CULTIVATED IN

BRITISH GARDENS;

WITH THEIR

HISTORY AND MODE OF TREATMENT.

THE DESIGNS BY

Sydenham Edwards,

FELLOW OF THE LINNEAN SOCIETY.

VOL. I.

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Carpitur.

LONDON:

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Stephen H. Edwards.

BY THE EDITOR OF THE REGISTER.

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- Trew fl. Imag.* Hortus nitidissimus, &c. sive amœnissimorum Florum Imagines quas collegit Christ. Jac. Trew. Ære incidit Joh. Mich. Seligmann. Völl. 2. Norimbergæ, 1768—1777. fol.
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- Vahl symb.* Mart. Vahl Symbolæ botanicæ. Partes 3. Havniæ, 1790—1794. fol.
- Vaill. act. paris.* Vide suprâ *Act. paris.*
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Verbena officinalis L. *Verbena* L.

Verbena officinalis L. *Verbena* L. 1815.

JASMINUM Sambac.

Arabian Jasmine.

DIANDRIA MONOGYNIA.

JASMINUM. *Cal.* monophyllus, divisus v. dentatus, persistens. *Cor.* monopetala, hypogyna, regularis, hypocrateriformis, 5-8 fida, laciniis lateraliter incumbentibus. *Stam.* epipetala, tubo inclusa. *Germ.* absque disco cingente, 2-loculare; loculis monospermis; ovulis erectis. *Stylus* 1. *Stig.* bilobum. *Bacca* didyma; (lobo altero sæpè abortiente). *Sem.* exalbuminosum. Frutices sæpiùs volubiles. Folia composita, nunc simplicia, petiolo articulato. Flores in corymbis oppositi. Brown. prod. 1. 520, 521: revocato MOGORIO Jussæi.

J. Sambac, foliis simplicibus, oppositis, ovatis v. ellipticis acutis, v. cordato-rotundis, glabris; ramis petiolis pedunculis calycibusque villosis; racemis solitariis, simplicibus.

Jasminum Sambac. Hort. Kew. 1. 8. ed. 2. 1. 15. Andrews's reposit. 497. Willd. sp. pl. 1. 35. Vahl. en. 1. 25.

Mogorium Sambac. Lamarek. encyc. 4. 210. Illustr. 1. 23. t. 6. f. 1.

Nyctanthes Sambac. Lin. sp. pl. 1. 18. Mill. dict. ed. 8. n. 1.

Jasminum arabicum. Cat. pl. hort. londin. (A. D. 1730) t. 7.

J. limonii folio conjugato. Burm. zeyl. 128. t. 58. f. 2.

Flos Manoræ. Rumph. amboin. 5. 52. t. 30.

Nalla-Mulla. Rheed. malab. 6. 87. t. 50.

Sambac arabum s. *Gelseminum arabicum.* Alpin. ægypt. 72, 73. Clus. cur. post. 3.

Syringa arabica foliis mali arantii. Bauh. pin. 398.

(α) flos simplex.

(β) flos multiplicatus. Andrews. loc. cit.

(γ) flos plenus. Kudda-mulla. Rheed. loc. cit. 89. t. 51.

Nyctanthes grandiflora; foliis ternis oppositisque. Lour. fl. cochin. 21.

Biorgyale. Caulis teres, glaber, cinereus: rami subvolubiles, virides, villosi; ramuli oppositi, axillares, obscure tetragoni, in fine floriferi. Flores in racemo impari-bracchiato subquini ad unum: bractea basi pedicellorum appressa. Folia divaricata, distantia, membranacea, opaca, venosa, brevissimè petiolata, ad summum 3-uncialia: ramulorum sæpiùs difformia et minora. Segmenta calycis suboctona, tubo semunciali floris dimidio breviora, subulata, erecta. Cor. nivea, purpureo-emarcescens, caduca: limbus suboctopartitus; lac. oblongæ, obtusæ, v. ex supernè inflexo margine subacutæ.

A favourite throughout the East on account of the fragrance of the bloom; but said to be native of only the warmest parts of India. An assertion universally repeated, but without any precise authority, that we can find. No author speaking of it pretends to have seen it, or even heard of its being seen, in any other than a cultivated state.

Rumphius remarks, that the plant thrives about the houses in Amboyna, but soon disappears, when these are deserted. Thunberg and Loureiro mention its cultivation in the gardens of China and Cochinchina, but as an exotic.

Dr. Roxburgh, among his unpublished drawings, has a Jasmine, found spontaneous in thickets on the Coast of Coromandel, which he takes for the type of the species; but which appears to us far too distinct to be readily admitted as such; having a many-flowered trichotomous inflorescence; a six-cleft calyx and corolla, with the segments of the latter tapering to a point, divaricate bractes beneath the divisions of the panicle, and a foliage of an appearance different from that of *Sambac*.

With us the Arabian Jasmine thrives best in the bark-bed of the stove, where it continues to bloom for six or seven months in succession; and when led along the frame of the building, attains 20 feet or more in length. The leaf has been assimilated by some to that of both the orange and lemon-trees. The flower drops easily from the calyx, and in decaying changes to a deep purple hue; the limb is under an inch in diameter, with segments rather shorter than the tube. Formerly this shrub was imported by the Italian-warehousemen from the Mediterranean; but this being engrafted on the common Jasmine, was esteemed of less value than that from the layer, on account of the disproportionate (and thence unsightly) growth of the stock and graft. Its cultivation with us is recorded as far back as the year 1665. Clusius tells us that it was received at Florence from Cairo as a novelty, in the year 1660; the date probably of its standing in that part of Europe, where it has become universal. The large full variety, known among gardeners by the name of the "Tuscan Jasmine," acquires a much broader disk with a shorter tube, by the filling of the flower. The bloom of this is strung by the females of India in the evening of the day into chaplets and necklaces. *Sambac* is the Arabian appellation of our plant; which, according to Alpinus, is in great request at Cairo.

Our drawing was made at the botanical establishment of the Comtesse de Vandes, Bayswater.

a A flower deprived of the limb, somewhat magnified and dissected, so as to show the position of the stamens and pistil.



Syd. Edw. Del.

Pub. by T. Ridgway 170. Piccadilly Mar. 1. 1865.

F. S. Sanborn Sc.

GNIDIA oppositifolia.

Pair-leaved Gnidia.

OCTANDRIA MONOGYNIA.

GNIDIA. Cor. longa filiformis, limbo 4-fido. *Squamulæ* 4-8, laciniis alternæ. *Stylus* filiformis lateralis; *stig.* capitatum hispidum. *Sem.* corolla tectum. *Folia* in paucis opposita; *flores* terminales distincti aut rariùs aggregati. Jussieu. gen. 77: revocata sub eadem ejus à Bergio mutuata Nectandra.

Obs. In *Gnidia* simplici corolla ab articulo tubi caduca.

G. oppositifolia, foliis decussatis, ovatis v. ovali-lanceolatis, acutis, glabris: callis staminiformibus 4 nudis supra faucem: staminibus 8 sub fauce.

Gnidia oppositifolia. Lin. sp. pl. 1. 512. Syst. veg. ed. 13. 309. Willd. sp. pl. 2. 428; (excluso Thunb. cum char. spec.) Hort. Kew. ed. 2. 2. 413; (hacce varietate tenùs.)

G. lævigata. Thunb. prodr. 67. Wendl. botan. beobacht. 17. tab. 2. fig. 14. Andrews's reposit. 89. Willd. sp. pl. 2. 426.

Thymelæa africana Sanamundæ prioris Clusii facie. Pluk. almag. 367. phyt. t. 323. fig. 7.

(β) rami, folia floralia, limbus intus, callique (in sicco saltèm) purpurascencia.

Passerina lævigata. Amæn. acad. 4. 312. Lin. sp. pl. 1. 513. Mant. 375.

Nectandra lævigata. Berg. capens. 134.

Thymelæa foliis planis acutis, coma & floribus purpureis. Burm. afr. 137. tab. 49. fig. 3.

Frutex. Caulis erectus, cicatriculis prominulis consitus, glaber, pennam corvinam crassus: rami virgati, superni, foliosi, divisi; ramuli filiformes, floriferi. Folia unguicularia, patentia, glauco-pruinata, modo apice rubentia: floralia parùm latiora conniventia. Flores subquini, terminales, aggregati, sessiles, pollicares, extus albo-sericei: tubus angustus, levissimè dilatatus in faucem, striatus, supra germen articulato-constrictus: laciniæ limbi hoc quater breviores, oblongæ, rotundatæ, primò explanatæ, indè replicatis lateribus convexæ: ad divisuras pro squamulis petalodis, corpuscula 4 stamina mentientia. Anth. sessiles, duplici serie. Germ. sericeum.

The tendency of the present species to unite with *STRUTHIOLA*, is curiously evinced by a transition of the more usual petallike scales, into four small inorganic bodies, representing as many stamens with short filaments and adnate yellow anthers; as well as by the subsiding of all the real stamens below the orifice of the tube.

Linnæus, in a later work, has combined this species from two of distinct genera, into which he had for-

merly divided it. Willdenow, in his edition of the *Species Plantarum*, has perplexed his record of the plant, by introducing into its synonymy the *oppositifolia* of Thunberg, which has downy leaves; as well as by separating from it the *laevigata* of that author and of Wendland, which belong to it. We have followed the editors of the *Hortus Kewensis*, in terming that the corolla in this plant, which others have termed the calyx.

The specimens we have seen, have been from one foot to two feet high. *Leaves* in some nearly ovate and shorter, in others oblong and narrower; of a glaucous hue, which proceeds from a whitish efflorescence, appearing like shagreen when inspected through a magnifying-glass. *Flowers* light yellow, rendered nearly white on the outside, by hairs of that colour. *Pollen* deep yellow. *Style* and *stigma* white, below the lower anthers. In the Banksian Herbarium we find spontaneous specimens with the branches, floral leaves, and stamenlike bodies of a purple colour, such as they are described by Bergius and Burman; but differing from the present in no other respect. The whole plant seems devoid of any peculiar scent. Native of the Cape of Good Hope; from whence it was sent to the Kew Gardens, by Mr. Masson, in 1783. Belongs to the green-house, requiring little care, and is easily multiplied by cuttings. Should be planted in peat-mould. Blooms in winter and summer.

The genus is arranged by Jussieu in his natural order of Thymeleæ.

The drawing was made at Mr. Knight's exotic nursery, King's Road, Fulham.

a The flower magnified and dissected, so as to show the position of the 4 false and 8 real stamens; also the lateral insertion of the style, and the pencilled stigma.



Edwards Del.

Pub. by J. Edgway 170, Piccadilly April, 1845.

L. Confiner

CORRÆA virens.

Green Correa.

OCTANDRIA MONOGYNIA.

CORRÆA. Cal. monophyllus. Pet. 4, conniventia. Anth. incumbentes, 2-loculares, longitudinalitèr dehiscentes. Caps. supera, 4-valvis, 4-locularis, è valvulis inflexis. Stigma 4-fidum.

Frutices foliis oppositis, simplicibus, pubescentiâ stellari; calyce campanulato, integro, denticulato; petalis in aliquibus connatis, corollam monopetalam simulantibus. Smith. in lin. trans. 4. 219.

C. virens, foliis oblongo-cordatis; corolla cylindrica, pendula: petalis cohærentibus; acuminibus discretis, patulisque.

Corræa virens. Smith. exot. bot. 2. 25. t. 72. Hort. Kew. ed. 2. 2. 349.

C. viridiflora. Andrews's reposit. 436.

C. reflexa. Ventenat. malm. 13. Labillardière Voy. à la recherche de la Peyrouse. 2. 120. Persoon. syn. 1. 419.

Mazentoxeron reflexum: Labillard. loc. cit. 66. t. 19. (1800)

Erecta, rigida, ramosa, pube compositâ ferrugineâ deciduâ inæqualitèr consita: rami axillares, oppositi, assurgentes. Folia brevissimè petiolata, membranaceo-rigidiuscula, divaricata s. reflexa, rugosa, subtùs tomentoso-albicantia, margine obsolete dentata depressaque, ad summum biuncialia: floralia bina nunc ita reflectuntur ut includant florem inter se ad instar involucri. Flores terminales solitarii v. gemini: pedunculi breves, sæpè instructi bracteis 2 oppositis. Cal. bilinearis, cupulatus, dentibus 4 minutis in margine. Cor. uncialis, crassitudine pennæ scriptoriæ, caduca, viridis, albo tomento pruinosa; labro brevi 4 lobo, lobis attenuatis. Stam. in recept. germinis, exserta, caduca: fil. alterna breviora ab infrà curvata et cochleari-dilatata, intùs cavo nectarifero exsculpta; reliqua sulcato-clavata: anth. antè anthesin viridilutescentes. Germ. hirsutum. Stylus exsertus, perstans.

This shrub, when four or five feet high and in full bloom, which it usually is about November, forms the most singular and pleasing ornament for the conservatory that we know of, especially when care has been taken to top the branches, so as to render it close and bushy. It is a hardy greenhouse-plant; easily multiplied by cuttings; thriving only in peat-earth. Introduced by Mr. George Hibbert, in whose botanical establishment at Clapham it was raised in the year 1800, from seed sent from New South Wales, of which and Van Diemen's Land, it is a native. The Banksian Herbarium has specimens from both countries, in which we perceived nothing that suggested the idea of the two plants belonging to distinct species.

Stem of a rusty brown colour: *leaves* deep green on the upper somewhat convex surface, whence the pubescence at last disappears, leaving it roughened by the small glandular prominent points on which each hair had stood. The two floral leaves are sometimes bent so far back as to embrace the flower between them in the manner of an involucre. The coherent petals of the corolla, when fallen from the calyx, separate by a space at the base, about equal to that by which they diverge at the top. In the Banksian Herbarium we find several species of this genus from different parts of Terra Australis, none of which, according to Mr. Brown, grow in any part of those regions lying within the tropic.

After some contestation, *Corræa* seems to be now unanimously allotted to Jussieu's natural order of Rutaceæ (Diosmeæ. *Brown in Bot. of Terra Australis: appended to Flinders's Voyage.*).

The drawing was made in November, at the nursery of Messrs. Colville, King's Road, Fulham.

a A portion of the upper half of the corolla reversed. *b* One of the four shorter stamens, showing the nectariferous cavity on the inner side of the dilated base of its filament. *c* Calyx and pistil. *d* A branched hair of the pubescence, magnified.



CHRYSANTHEMUM indicum. $\alpha. \delta.$

The yellow and the white quilled indian Marygold.

SYNGENESIA POLYGAMIA SUPERFLUA.

CHRYSANTHEMUM. (Recept. nudum. Sem. nudum s. non papposum). Flores radiati. Cal. hemisphæricus imbricatus, squamis interioribus membranaceis. Caulis simplex v. ramosus; fol. simplicia v. pinnata; flores terminales, solitarii v. corymbosi; squamæ calycinæ oblongæ, v. ovatæ scariosæ; ligulæ luteæ v. lutescentes, albæ aut purpurascens. Jussieu. gen. 183: revocato LEUCANTHEMO Tournef.

Div. *Chrysanthema*: squamis cal. oblongis: lig. albis v. purpurasc.

C. indicum, caulibus suffrutescentibus; foliis petiolatis, ovatis, sinuato-pinnatifidis, villosis, lobis 3-5, mucronato-dentatis: floribus corymbosis.

Chrysanthemum indicum. Lin. sp. pl. 2. 1253. Thunb. jap. 320. Lour. cochin. 499. Curtis. mag. 327; (cum ic. var. purp. pl.) Willd. sp. pl. 3. 2147. Hort. Kew. ed. 2. 5. 95.

Anthemis artemisiæfolia. Willd. in der gesell. naturf. fr. zu Berl. n. schr. 3. 431. Ejusd. sp. pl. 3. 2184; et Enum. 911.

A. stipulacea. Mærch suppl. meth. pl. 258.

A. grandiflora. Ramatuelle in Journ. d' hist. nat. 2. 234. Desfont. arbriss. 1. 315.

Matricaria indica. Mill. dict. ed. 8. n. 3.

M. sinensis, minore fl., pet. & umbone ochroleuco. Pluk. amalth. 142. t. 430. f. 3.

M. sinensis. Serune. Rumph. amb. 5. 259. t. 91. f. 1.

Tsjetti-pu. Rheede. malab. 10. 87. t. 44.

Kik, Kikf, v. Kikku, i. e. *Matricaria*. Kämpf. am. ex. 875.

(β) flos plenus.

Chrysanthemum maderaspatanum oxyacanthæ fol. cæsiis ad marginem spinosis; cal. argenteo. Pluk. alm. 101. t. 160. f. 6.

Herba perennis, stolonifera, villosa, Caules plurimi, angulato-teretes, 2-3 pedales: rami fastigiantes, pubescentes. Folia crassiuscula, sparsa nisi divisuris proxima, numerosa, remota, 3-5 nervia, subtus è villis densioribus pallescentia, in petiolum longiusculum attenuata, sæpiùs ad basin rudimento foliaceo sessili utrinque stipulata. Calycis squamæ numerosæ, lanceolata, intimæ sphacelato-obtusæ; ligulæ radii aliquoties his longiores. Recept. luxurians paleaceum; alioquin nudum?

A native of China; from whence the now so well-known purple variety was brought to France by Monsieur Blancard, a merchant of Marseilles, in 1789. To France we are indebted for its introduction into this country, where, in 1795, it was considered as new by the nurserymen, and sold at a very high price. The other varieties have ap-

peared subsequently, and from other quarters. The species had however certainly been cultivated at Chelsea in 1764, by Miller, who received it from Nimpu; but was most probably soon lost, since we do not find it mentioned in the first edition of the *Hortus Kewensis*.

The receptacle of the flower, in the specimens which have been inspected in European gardens, has been found to be clothed with chaff-like bractes; while that of those from India, in various Herbariums, is said to be naked. Hence both the specific identity, as well as the admissibility of the former into a genus, of which a naked receptacle is a character, have been questioned. But from subsequent observation it appears now to be held, that the chaff is adventitious, and an effect of luxuriance; so that, on this head at least, its present rank is no longer disputed. When cultivated in Provence, the florets are said to be studded with yellow powdery highly odoriferous particles, which disappear in the colder climate of Paris; where, as we are told, the florets have a greater tendency to retain their tubular or, as the gardeners term it, "quilled" form; and not to open into thongs or ligulæ. In that state the appearance of the flower is considerably altered, the paler opaque exterior of the florets presenting itself, instead of the deeper-coloured bright interior. No flower varies more in colour, whence it has become by its numerous hues a principal decoration of our conservatories in the dreary months of November and December. It survives in the open air our severest winters, in any soil (except a very wet one) and situation; but succeeds best when dressed and attended to; seldom expanding in perfection unless under shelter and in warmth. A favourite with the florists throughout India, but particularly in China, where it is kept in a dwarf state, and the flowers treated much in the same way as directed by our gardeners for the management of the Carnation. We have heard that the single-rayed plant is in our gardens, but have not seen it. The bloom, when smelled near, reminds us of the Chamomile, of which by some authors it has been esteemed a congener.

We are told, if cuttings about four or five inches long are taken from the upper part of the stems in May or June, and planted in garden-mould, under a hand-glass, in the usual way, they will take root and flower the same season in a dwarf state; and if only one flower is left to stand, the bloom will be considerably larger than when more remain.



WITSENIA maura.

Downy-flowered Witsenia.

TRIANDRIA MONOGYNIA.

WITSENIA. *Cal.* o. *Cor.* erecta, regularis, subæqualis, persistens; tubulosa, 6-fida limbo explanato v. connivente: rariùs hexapetalodipartita. *Stam.* inclusa, erecta: affixa basi laciniarum exteriorum. *Germ.* inferum v. subsemisuperum, polyspermum. *Stylus* filiformis, exsertus. *Stig.* obsoletè trina. *Caps.* lignosa, trigono-ovata: 3-loc., 3-valv., valvis medio septigeris. *Sem.* biseriata, angulosa.

Arbusculæ sempervirentes. Caudex palmoido-lignescens, erectus, anceps, simplex v. divisus: foliis vaginatus ensatis, numerosis, collateralidistichis, equitantibus, flabellatim divergentibus, striatis, glaucis; terminalibus confertissimis. Flores spathacei: spathæ 2-valves, unifloræ, clausæ; seorsim bracteatae aut geminatim per squamas communes imbricatas, in caule ancipiti cymosè vel spicatè elevatae; rariùs in caudice sessili-terminales: valva inter. membranacea delitescens.

W. maura, spathis geminatis: limbo connivente; laciniis 3 extimis dorso hirsutis.

Witsenia maura. Thunb. diss. nov. gen. 34. c. ic. Ejusd. prodr. 7. Murr. in syst. veg. ed. 14. 83. Willd. sp. pl. 1. 247. Lamarck. ill. 1. 108. t. 30. Vahl. enum. 2. 47. Redouté liliac. 245; (tab. è sicco desumpta.) Hort. Kew. ed. 2. 2. 109.

Ixia disticha. Lamarck. encyc. 3. 333.

Antholyza maura. Lin. mant. 175. Syst. veg. ed. 13. 78.

Bi-quingue pedalis, divisa, necne. Spathæ sesquiunciales, inæquivalves, bifidæ, per paria in pedunculo communi disticho-spicatæ, v. sessiles in fine caudicis: paria singula à squamis communibus foliaceis distichis simul imbricata. *Cor.* 2-uncialis, clavato-cylindrica: tubus viridescens, duriusculus, amplius in nigrum collum at parùm, limbo clauso 4-plò longior: laciniæ ovato-attenuatæ; exter. discolores, tomento brevè extùs flavicantes, intùs glabrato-virentes; inter. penicillo flavo in apicibus, cæterum nudæ ac virides. *Stam.* stricta, viridia: fil. semitereti-subulata: anth. vix breviores, à basi bilobâ cucullatè pertusâ stabiliùs infixæ: pollen flavum. *Germ.* bilineare, oblongum, teres, apice depressum, subsemisuperum; pro unâ 4tâ parte intra corollam liberum, ubi lucido-virens ac levitèr 3-sulcum. Flos totus nitet papulis atomoideis densissimis, omninò ac FERRARIÆ.

This very singular plant, dried flowers of which have been long and very generally admired in the Herbarium, first appeared in this country in 1790; having been sent by Mr. Masson from its native country, the Cape of Good Hope, to the Kew Gardens. It has however never been known to flower with us till last December, when several fine specimens showed their bloom together at Hammersmith, in the

nursery of Messrs. Lee and Kennedy; by whose liberal communication of them, we are enabled to present our readers with the first figure from the living plant yet published.

The genus, as far as it is yet known, belongs wholly to the neighbourhood of the Cape of Good Hope; unless indeed *TAPEINIA* should at last be found to be of it. The species appear to bear the same relation to the rest of the *Ensatae*, that *DRACÆNA*, *YUCCA*, and their kindred frutescent genera, do to the herbaceous *Liliaceæ*. Botanists vary as to the situation they ascribe to the germen. In the present species the upper fourth part of that organ is evidently detached from and within the tube of the corolla, and consequently *superior*; while the remainder is as plainly grown to and united with the tube, and therefore *inferior*. In *corymbosa* it is simply inferior. We mean to be precise on this point, as we stand so far in contradiction to some very eminent botanists.

In the four species known to us a peculiar sameness pervades the foliage of them all; but the reverse is as remarkable in the bloom. *Fruticosa* and *partita* are not yet known to be in our gardens. The latter is curious for its hexapetaloid corolla, with long linear-spatulate segments; and was first recorded in the *Annals of Botany* (v. 1. p. 237) from very perfect spontaneous specimens in Mr. G. Hibbert's Herbarium. Monsieur Ventenat (*in Dec. nov. gen. plant.* 1.) has separated *corymbosa* under the generic name of *NIVENIA*: a separation in our judgment, to say the least of it, most inexpedient. On the authority of Monsieur Bruguières, the stem of *maura* is said to yield a strongly saccharine juice. We suspect that it is a plant requiring the growth of a considerable number of years before it flowers. In Mr. Griffin's Collection there is a specimen, at this time little less than five feet high, which has not yet flowered. It thrives best in peat-earth, and requires no greater degree of warmth than will prevent the frost affecting it. When the flowers are terminal and sessile, the upper leaves extend beyond them; but when these, as in our specimen, are elevated upon a common peduncle or stem, they generally extend beyond the leaves. Thunberg found it flowering in April and May on the sides of the hills near False Bay. The green part of the flower dries yellow.

a A flower dissected to show the position of stamens and pistil. *b* A spathe disposed so as to show both valves. *c* Shows that portion of the germen which is detached within the flower and *superior*, as distinguished from the lower portion, which is grown together with it and *inferior*.



Sy. Edward Del.

Pub. by J. Ridgway 170 Piccadilly Mar. 1. 1815.

L. Suppl.

ERICA filamentosa.

Long-peduncled Heath.

OCTANDRIA MONOGYNIA.

ERICA. (Germ. superum.) Cal. 4-partitus, interdum duplicatus. Cor. (persistens) campanulata, sæpè ventricosa, 4-fida. Anth. bicornes aut emarginatæ, exsertæ aut latentes (antè anthesin per foramina 2 annexæ. Dr.) Stig. sub-4-lobum. Caps. 4-(8-) loc., 4-(8-) valv., calyce cincta.

Suffrutices; fol. minuta, opposita aut verticillata aut sparsa; flores aut axillares aut terminales, variè dispositi. Jussieu. gen. 160.

Div. V. Brevisfloræ. Corollæ longitudine quartam uncia partem superantes, nec semuncia longiores: Tubus calyce longior. Dryander. in Hort. Kew. ed. 2. 2. 390.

Subdiv. V. D. Corollæ cylindricæ, vel supernè dilatatæ. Id. loc. cit. 396.

E. filamentosa, floribus axillaribus, foliolis calycinis subulatis, pedunculis flore longioribus. Idem loc. cit. 398.

Erica filamentosa. Andrews's heaths. vol. 2.

Caulis remotè prolifer: rami divaricato-assurgentes, foliis capillati densis, arrectis, filiformibus, acutis, villosutis, albâ lineâ in dorso: petiolis membranaceis sesquilinearibus elasticis. Inflor. numerosa, pedunculata, verticillatè axillaris in foliis aliquantùm apicis inferioribus: pedunc. flore 4-lineari longiores, rubri, flexiles, filiformes, instructi bracteis 2 oppositis à calyce remotis, cum alterâ inferiore. Cal. herbaceus, corollâ duplo brevior, segmentis subulatis, rubro-ciliatis. Cor. cyathoidi-cylindrica, roseo-pallescent, lacinulis brevibus, rotundatis, patulis. Stam. ab unâ tertia parte inclusa: fil. alba apiculo inflexo, brunneo: anth. muticæ, brunneæ, conniventes. Germ. latè turbinatum, striatum, areolâ planâ hirsutâ ampliori coronatum: stig. inclusum, quadrangulo-capitatum.

The arrangement of this perplexing and extensive genus by Mr. Dryander, in the late edition of the Hortus Kewensis, appears to us a display of as much acute discrimination and distinct definition as has been ever made within equal scope. It is a model, and we suspect will not soon be equalled.

The specimens we have seen of *ERICA filamentosa* have not exceeded two feet; with branches in two distant whorls, converging into a kind of corymb. Its slender capillary foliage standing on narrow membraneous petioles, is set simultaneously into a very peculiar vibratory motion by the slightest impulse. The plant flowers in all seasons of the year. Introduced from the Cape of Good Hope by Mr.

William Rollisson in 1800. Like most of its congeners from the same quarter, it requires to be sheltered from frost, and planted in the black earth found at the surface of our sandy heaths.

The drawing was made at Mr. Knight's exotic nursery, Fulham.

a Stamen magnified, showing the awnless anther. *b* Pistil magnified, showing the flat shaggy summit of the eight-furrowed germen. *c* A side view of a magnified leaf. *d* Its flat narrow elastic petiole.



COREOPSIS incisa.

Cut-leaved Coreopsis.

SYNGENESIA POLYGAMIA FRUSTRANEA.

COREOPSIS. (Radiata: Pappus aristatus: Recept. paleaceum.)
Cal. polyphyllus, foliolis à receptaculi paleis vix aut parùm distinctis.
Recept. planiusculum v. levitèr convexum. *Flosc.* disci hermaphr., fer-
 tiles; *radii* feminei s. neutri, ligulis disco transverso æqualibus s. longio-
 ribus, steriles. *Pappus* 2-3-aristatus: aristis glabris s. retrorsum scabris.
Gartn. sem. 2. 457.

Herbæ erectæ; fol. sæpiùs opposita, in quibusdam multifida; flores
 axillares et sæpiùs terminales; ligulæ quarundam albidæ. Jussieu. gen.
 188. Est *BIDENS* radio larcata. Gartn.

C. volubilis, fruticosa, villosa: foliis petiolatis quinatis et ternatis, fo-
 liolis ovato-lanceolatis, subpinnatifidis v. inciso-serratis, ultimo bis-ter
 majore: radio integerrimo.

Caulis 8-pedalis v. ultrà, dextrorsum volubilis? spadiceo-corticatus, supernè
 virens, teres, striatus, assurgentèr ramosus, remotè foliosus: rami divaricati,
 axillares, oppositi, foliis 2 in basi. Petioli folio breviores, connato-amplexi-
 caules, canaliculati: foliola mollia, subtùs pallidiora, è nervo medio emittentia
 utrinque alios plurimos parallelos (pinnae cohærentes in summos dentes solu-
 tas designantes?); lateralia basi inæqualia. Flores erecti ramulorum supe-
 riorum caulisque terminales, umbellatè cymosi, flavi; radio infra unciam
 transverso: pedunculi rariùs furcati, striato-filiformes, biunciales, uniflori, è
 foliis simplicibus verticillato-approximatis. *Cal.* duplex, polyphyllus, subæ-
 qualis, disco parùm brevior: exterior herbaceus, urceolato-radians, è foliolis
 linearibus aculis, basi gibbosis, cum striâ in dorso; interior membranaceus,
 paleis disci lanceolatis concaviusculis exactè similis at subcoloratus. *Flosc.*
radii subseni, neutri, ligulâ ovali-lanceolatâ, 7-nervi, rugis trinis sulcatâ:
 disci bis breviores, fauce corrugatâ, ore revoluti, 5-fido. *Recept.* planum.
Germ. subteres, ciliatum, bicorni-aristatum, aristis retrorsum scabratis, tubulo
 sine fauce æqualibus: stig. 2, linearia cum mucrone, à supino hirsuta, citra
 fuscâ semiexsertam antheram replicata.

Three very nearly related, but distinct species, seem to
 have been confounded under *COREOPSIS reptans*. First, the
 Linnean plant with simple ovate lower, and ternate upper
 leaves, deeply serrate, with oblong teeth, and a flower
 having an indented ray: second, that of Sloane's work
 (*Hist.* 1. 261) repeatedly, but erroneously adduced for its
 synonym; but in which none of the leaves are ovate simple
 and deeply serrate, but uniformly ternate and shallowly
 serrate, with short triangular teeth: third, our present
incisa, where the leaves are all either quinate or ternate,
 deeply cut, and the ray of the flower pointed and quite en-

tire. Of Linnæus's plant we can only judge from what he himself has told us, and from the figure in Dr. Smith's "Spicilegium," which we should have taken for our plant, but for the indented ray, no simple ovate leaf being shown there. Of the species described and figured by Sloane, a specimen sent from Jamaica by Dr. Houston, is deposited in the Banksian Herbarium, as the Linnean *reptans*; so are two others from the same quarter presented by Mr. Shakespeare, but these in truth belong to the present species, and are distinct from both the preceding.

Our plant had been raised from seed about three years ago, and attained the height of eight feet, supporting itself by twining round its prop. *Corymbs* generally five-flowered, terminating the branchlets that issue from the axils of the upper leaves: *flowers* of a golden yellow, darkened in the disk by brown half-extruded *anthers*; *peduncles* sometimes divided above the middle. *Stem* about the thickness of a large wheaten straw near the base. Upper *leaflet* of the leaves about 2 inches long. Having seen only one living specimen, and that under very artificial culture, we have not ventured to call it *volubilis*, although apparently the fittest name.—A native of Jamaica, and perhaps of other parts of the West Indies. Messrs. Colville, to whom its introduction is due, have no recollection of whence they obtained the seed from which it was raised. Requires to be kept in the bark-bed of the stove, where it flowers about December. The drawing was made at the nursery of Messrs. Colville, King's Road, Chelsea.

a The calyx and chaffy receptacle. *b* A sterile floret of the ray. *c* A fertile floret of the disk seated between the two barbed awns of the germen. *d*. The same magnified.



Edw. Edwards Del.

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LIPARIA hirsuta.

Shaggy-stemmed Liparia.

DIADELPHIA DECANDRIA.

LIPARIA. *Cal.* urceolatus 2-labiatus, suprâ 3-fidus, infrâ longior 2-dentatus aut indivisus laciniâ interdum longissimâ petaloideâ. *Corollæ* carina 2-petala, apice connivens. *Anth.* 3, cæteris brevius stipitatae in apice vaginae staminiferæ ex *Lin.* *Stigma* simplex. *Legumen* ovatum, 1-loc., 2-valv.; sem. pauca.

Frutices glabri habitu BORBONIÆ aut sæpius villosi; folia simplicia, sessilia, villosa aut glabra; stipulæ subnullæ; flores axillares aut terminales, solitarii aut sæpius plures. *Stam.* decimum non deficiens ex *Lin.* Jussieu. gen. 353.

L. hirsuta, caule tereti, subsericeè hirsuto; racemis terminalibus sæpius geminatis; foliis obovato-oblongis, glabris, trinerviis.

Liparia hirsuta. Thunb. prod. 124. Willd. sp. pl. 3. 1117. Hort. Kew. ed. 2. 4. 318. (Nec verò Mærchii in suppl. method. 52.)

Frutex 3-pedalis: caulis erectus, prolifer, infernè defoliatus, cicatrizatus; rami virgati, numerosè foliosi, superni. Folia exstipulata, sparsa, patula, rigida (ferè ac Rusci), sessilia, obovato-oblonga, mucronato-acuta, ferè uncialia, interstitiis plus duplo longiora, periphæriâ obsolete cartilaginea. Racemi à foliis superioribus sensim in bracteas hirsutas abeuntibus tanquàm ab involucrio cincti, toti hirsuti nisi corollâ, erecti, multiflori imbricatim sparsi: bracteæ foliaceæ, calyce breviores, appressæ, cuspides phacelato-nigricante: pedicelli inclusi. *Cal.* è basi intruso-obtusatâ urceolatus, 5-fidus, segmentis lanceolatis, 4 superioribus conniventibus, summis 2 brevius discretis, infimâ remotiore majore, cuspidè nigrâ. *Cor.* flava, tota de calyce erecto-reflexa: pet. subisometra: vexillum cordatum lobis subunidentatis, apice bifidum, margine involutum: alæ dolabriformes suprâ in margine inferiore subexcisæ, inter se carinam arrecto-cuspidatam à basi bifissilem obvoluto-velantes. *Fil.* diadelphea (simplex et æqualitèr 9-partitum). *Germ.* lanceolatum, hirsutum: stylus longior, setaceo-continuus: stigma bifurcum dente antico hispido, postico glabro.

Of this handsome species, we know of no figure extant in any work yet published. It is a native of the Cape of Good Hope, and was introduced by Mr. Masson in 1792. Our plant was about 3 feet high; stem about the thickness of a large pen, with many divided slender pliant branches surrounding it at a point high above the root, and where the white silky pubescence is conspicuously thicker and longer; the branchlets are terminated by single or double racemes, each bearing 8-12 scentless gold-coloured flowers, parted by hairy bractes about 4 lines long, with black sphacelate points: petals about half an inch long;

style when magnified pubescent, about equal to the *germen*: *calyx* sitting close to the lower part of the corolla, with a remarkable concave or dented base; *leaves* about the third of an inch wide at most. The boundaries of the genus have been as yet but incompletely defined, and require revision.

The *LIPARIA hirsuta* of Mœnch's work, above quoted, is a very different species, but not *BORBONIA trinervia* of Bergius, as he presumes. This flowered at Kew in 1794, and was deposited along with a spontaneous Cape specimen in the Banksian Herbarium, by the same title that Mœnch has given it; but was not recorded in the late edition of the *Hortus Kewensis*; the *LIPARIA hirsuta* of which is Thunberg's and the present plant. So that a new name remains to be adopted for Mœnch's species, which is not yet published in any other work known to us than his own.

Our plant has a forked stigma, a calyx that does not answer to that of its generic character, nor are three of the anthers more shortly stipitate than the others; but still we believe it to be a good *LIPARIA*. The drawing was made from a fine plant that flowered last January, at the nursery of Messrs. Whitley, Brame, Milne, and Co. Parson's Green, Fulham; where it had been raised from seed.

a Calyx with the pedicle attached. *b* The simple and the nine-parted stamen. *c* The pistil. *d* The forked stigma, magnified. *e* One of the two alæ or wings of the flower.



Syd. Edwards del.

Published by J. Ridgway, 170 Piccadilly, April 1, 1916.

IPOMŒA sanguinea.

Blood-flowered Ipomœa.

PENTANDRIA MONOGYNIA.

IPOMŒA. Cal. 5-partitus, nudus. Cor. campanulata v. infundibuliformis, 5-plicata. Germ. 2-3-loculare, loculis dispermis. Stylus indivisus. Stigma capitatum, 2-3-lobum. Caps. 2-3-locularis.

Herbæ volubiles, quandoque erectæ. Folia indivisa v. lobata, nunc pinnatifida. Semina in quibusdam comosa. Brown. prod. 1. 484.

I. sanguinea, pedunculis supernè cymoso-trichotomis, folia cordato-triloba v. hastata superantibus; limbo oblato-ventricosus; staminibus ascendentibus, longè exsertis.

Ipomœa sanguinea. Vahl symb. 3. 33. Willd. sp. pl. 1. 885.

Frutex volubilis, ramosus, totus nudus; cortex badius, rimosus infra, suprâ lineato-verruculatus. Folia subtriuncialia, petiolata, cordato-v. aurito-triloba (vix unquam integra), 5-nervia, subtus pallidiora; lobi acuminati, medius longior oblongo-lanceolatus, laterales conniventes v. sæpè divaricati, posticè latiores & in angulum sinuato-dentatum repandumve ad basin producti, sinu petiolarum subrotundo & profundo distincti: petiolus filiformis, sulco superno. Pedunculi axillares, solitarii, virides, filiformes, folio longiores, supernè cymosi, pedicellis 2 lateralibus trifloro-trifidis, medio unifloro: bracteola acuta ad basin cujusque. Cal. herbaceus corollâ aliquoties brevior, è foliolis setaceis infra dilatatis & connexis. Cor. erecta, levitèr arcuata, miniato-sanguinea, unciam longa, angusta, clavato-tubulata, compressa, subtus ventricosior; limbus oblato-globosus, ventricosus, ore contracto 5-dentatus, tubo faucis juncto pluriès brevior. Stam. accumbentia, subinæqualia. Stylus capillaceus. Stigma papilloso-granulatum, capitatum.

The present is the only representation of this rare and singular plant yet published. The species was first recorded and described by Professor Vahl in his "Symbolæ botanicae," from specimens sent to him from the danish West-indian island of Sainte Croix. In the living state it seems to have been unknown in Europe, until it appeared in the collection of the Comtesse de Vandes, into which it had been introduced by Mr. R. A. Salisbury, who had received the seed from the West Indies. It has not found a place in the late edition of the Hortus Kewensis; and has been generally mistaken for *IPOMŒA repanda*, a very distinct species. Willdenow has marked it as an annual, of course at a venture, seeing that he has no authority for so doing in Vahl, the sole source of his information concerning the plant. It is in fact a high-growing, twining, leafy, evergreen shrub, with a stem about the thickness of a man's thumb near the

base, just above which it divides into numerous slender flexile branches, towards the ends of which the flower-stalks are produced from the axils of the leaves, sometimes drooping, at others upright. When placed in the bark-bed of the hot-house it grows with great luxuriance, and may be led along a trellis-work to a great length in all directions. The bloom is of a deep orange-scarlet colour, about an inch long, with the diameter nearly twice as large as that of a crow-quill, beginning to appear about February and continuing for some weeks in succession. This is ornamental, and approaches that of *coccinea*; but differs at first sight by its very remarkable limb, a part which seems not to have been correctly made out by Vahl in his dried plant, a duplicate of which he has sent to the Banksian Herbarium. The side-lobes of the leaves are sometimes horizontally divaricate, at others convergent, but scarcely ever confluent with the middle one; and are sometimes indented, sometimes rounded and entire at their lower angle or earlet.—We have not heard, that it has yet been multiplied in any way; nor that it has produced seed.—Our drawing was made at the botanic establishment of the Lady we have mentioned above, at Bayswater, in February last.

a The calyx removed from the corolla. *b* The corolla dissected longitudinally, to show the position of the stamens. *c* The pistil.



Hydr. Edwards del.

Tab. by J. Ridgway 170 Accad. Ital. April 1 1815.

Smith Sc.

ERIGERON glaucum.

Fordyce's Erigeron.

SYNGENESIA POLYGAMIA SUPERFLUA.

ERIGERON. (Recept. nudum. Sem. papposum. Flores radiati.) Flores radiati ligulis linearibus numerosis. Cal. oblongus imbricatus inæqualis. Pappus pilosus. Ligulæ in aliis albidæ v. purpurascentes, luteæ in aliis quarum insuper antheræ nonnunquam basi 2-fetosæ INULAS indicant. Jussieu. gen. 180.

E. glaucum, foliis ciliatis, glaucis, viscosis; radicalibus alato-petiolatis, paucidentatis; caulinis sessilibus integris.

Herba perennis. Rhizoma carnosum-caudescens; caules supernè ambientes, plures, ascendentes, villosi, striato-teretes, pedales v. ultrà; pedunculi erecti, pauci, infernè positi, axillares, distantes, foliati, uniflori. Folia tenera, pruinâ canâ & exsudato visco obducta, graveolentia, 3-nervia, venosa; radicalia plurima, 4-uncialia, spathulata, quasi in rosam approximata ferè ac in BRASSICA, laminâ obovatâ, unciam latâ, laxè à lateribus serratâ, latum petiolum versùs attenuatâ; caulina decrescentia, angustè oblongata v. lanceolata, distantia. Flores erecti, solitarii, transversè subbiunciales. Cal. herbaceus, ordine plurali polyphyllus, æqualis, patentissimus, confertus, disco isometer; foliola linearia, acuta, carinato dorso pilosa. Discus amplus, convexus, flavus; flosc. villosi, extus toti papilloso-punctati, laciniis erectis: anth. flavæ, parùm emicantes: stig. 2, oblonga, crassiora, erectiora. Radius lilacinus, numerosus (flosculis tot quot calyx foliolis?), explanatus, integerrimus, 8-linearis & disco bis altior, infernè extus villosus, ligulis angustè lanceolatis: stig. 2, capillacea, replicata, in stylo productiori. Germ. utrique simillimum, verticale, compressum, sericeum, striatum: pappus sessilis, capillaris, obsoletè denticulatus, bis longior. Recept. pulvinatum, nudum, scrobiculato-punctatum.

At first sight our plant appeared to resemble so closely several both american and european species, with which we were already acquainted, that we hardly expected to find it, as we did upon a more attentive inspection, keep specifically aloof from all which had been recorded in any work known to us; and that it had not found its way into the extensive Herbariums at Sir Joseph Banks's or Mr. Lambert's. Not to rely upon ourselves, we had recourse to more than one learned botanist, who liberally communicated the result of their researches, which agreed with our own. It first appeared amongst us about three or four years ago, in the collection of the Comtesse de Vandes, whose experienced and industrious gardener (after whom we have called it in the english name) had raised it from seed, which he is almost sure came from South America, and he suspects

from Buenos Ayres. He tells us it is easily cultivated, and as easily multiplied by parting the root; that it will do in the greenhouse, where however it should be considered as rather tender. When in flower, which it is about November and December, it reminds us of the well-known *ASTER alpinus*. The *rootstock* rises into a fleshy and ultimately brown stem, resembling that of Colewort, but not thicker than a common quill; sometimes nearly 8 inches in height, bearing a closish head of *leaves*, from among which several *flower-stems*, each terminated by a single flower, and producing from below a few distant one-flowered leafy stalks placed in various directions. *Leaves* glaucous and viscous, with a disagreeable smell like that perceptible in some of the SCROPHULARIÆ (Figworts): on the rootstock these are broadly petiolate, with an obovate blade at times more than an inch in breadth, loosely serrate at the sides, entire at the top; on the flower-stem and stalks several times narrower, entire and sessile. The florets of the lilac-coloured ray are rather broader than usual in this genus, where the almost capillary narrowness of these affords a chief mark of its separation from *ASTER*. The drawing was made in the garden of the Lady we have mentioned above, at Bayswater. We saw several others, but not in flower, at Mr. Gray's nursery, Kensington Gore. If any one whose eye this may meet, should be acquainted with any circumstance relating to this plant that has escaped us, and should think proper to communicate the information to Mr. Ridgway, the publisher, or to Mr. Edwards, it will be inserted in a subsequent Number.

a The calyx of the flower enclosing the pulvinate (cushioned) scrobiculate (pitted) receptacle stripped of the florets. *b* An hermaphrodite floret from the disk on its germen, which is crowned with a long hairlike pappus (down): magnified. *c* A female floret from the ray with its germen: slightly magnified.



Edw. Edwards del

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Smith. Sc.

ACHANIA mollis. α .

Lobed-leaved woolly Achania.

MONADELPHIA POLYANDRIA.

ACHANIA. (Stam. in tubum corolliferum connata, indefinita. Fructus simplex multiloc.) *Cal.* tubulosus 10-striatus 5-dentatus, caliculo 8-phyllo cinctus (uterque persistens). *Pet.* convoluta, basi hinc auriculata. *Anth.* in apice & superficie tubi contorti. *Stylus* 1; *stig.* 10. *Bacca* 5-loc., 5-sperma. *Frutex*; *flores solitarii axillares.* Jussieu. gen. 273; sub MALVAVISCO.

A. mollis, foliis tomentosis, foliolis calycis exterioris patulis. *Hort. Kew.* 2. 459. *Ed.* 2. 4. 233. *Willd. sp. pl.* 3. 839.

(α) foliis angulatis. *Dryander. in sched. banks.*

Achania mollis. *Andrews's reposit.* 452.

(β) foliis indivisis. *Dryander. loc. cit.*

Achania mollis. *Thompson's bot. displ. t.* 5.

Caulis teres, erectus, tomentosus, supra distanter & divaricatè ramosus. Folia petiolata, remota, mollia, canescentia, ovata et indivisè acuminata v. ovato-triloba lobo medio angulato-attenuato lateralibus brevissimis, petiolo aliquoties longiora, subserrato-dentata. Flores longius pedunculati, erecti, unciales, in foliis rameis & caulinis supernis. Cal. exter. sub-8 phyllus; foliola patula: inter. monophyllus, hinc fissurâ unâ cæteris profundiore: uterque villosus. Cor. turbinato-convoluta: pet. 5, obovato-oblonga, hinc basi aucta lobo columnam stamineam involvente. Tubus stamineus apice 5-dentatus; anth. ex oblongis orbiculatim dehiscentes; pollen è sphaerulis lævibus grossius granulatum. Stigmata fimbriata, punicea.

We have two varieties of this species in our gardens: the one with ovate-oblong undivided acuminate leaves introduced from Jamaica; the other, the present plant, introduced in 1780 by Mr. Benjamin Bewick, from South America. We have also two other species of the genus, presently distinguishable by the foliage, but very similar in the bloom to each other. All of them grow in a loose wide-spreading way, so as to take up much room, but *Malvaviscus* far more so than the present; of which we have never seen any specimen that has exceeded four feet. When its flowers, which stand in the axils of the upper leaves of the stem and branches, are numerous, it is very ornamental, more so than either of the other two. In *Malvaviscus*, which is the largest growing, and of the oldest date of the three with us, the foliage is of a dark shining green and rough, in the present grey and clouded, being covered with a short,

close and soft pubescence. The genus was named ACHANIA by Dr. Solander from a Greek word that refers to the flower's not opening; which it never does more than is shown in our figure of the present species. A good representation of the variety β , will be found in "Thompson's botany displayed," a periodical work of great merit begun in 1798, but which has not, (from what cause we do not know,) proceeded beyond a fourth fasciculus. This variety has never fallen in our way; but the present is very common in our stoves, where it requires to be kept both summer and winter, or else will not flower in perfection. Propagated by cuttings. Blooms late in the autumn. The leaves are 3-4 inches long, and 2-3 broad. The drawing was made at the nursery of Messrs. Colville, in the King's Road, Chelsea.

a A petal extended so as to show the lateral lobe, which in its place is (with those of the other four) wound round the base of the stameneous column, thus preventing the expansion of the flower. *b* The entire pistil drawn out of the stameneous sheath. *c* The hollow stameneous column, showing the appearance of the five-cleft orifice when the pistil is withdrawn.



CAMELLIA Sasanqua.

Lady Banks's Camellia.

MONADELPHIA POLYANDRIA.

CAMELLIA. *Cal.* 5.-partitus coriaceus, squamis plurimis minoribus infrà cinctus. *Pet.* 5 (plurave), magna basi coalita (circa discum hypogynum). *Fil.* infrà coalita in coronam cui petala adnascuntur; *anth.* subovatae. (*Germ.* polyspermum). *Stylus* 1: *stig.* 3. *Caps.* (coriacea 3-pulvinato-v. abortu globosa), 3-sulca, 3-cocca, 3-sperma. *Frutex*; *folia* alterna, coriacea; *gemmae* axillares imbricatim squamosae; *flores* axillares & terminales, subsessiles (v. pedunculati), in hortis pleni. Jussieu. gen. 262. *Huc proculdubio THEA revocanda.*

C. Sasanqua, ramis virgatis capsulâque villosis; foliis junioribus elliptico-lanceolatis, serratis; petalis obovatis vel obcordatis.

Camellia Sasanqua. Thunb. japon. 273. t. 30. *Syst. veg.* Murr. ed. 14. 632. Cavan. diss. 6. 306. t. 160. f. 2; (è Thunb. mutuata).

Willd. sp. pl. 3. 842. Hort. Kew. ed. 2. 2. 235. Poiret. suppl. encyc. de Lamarck. 2. 48.

Cha-wiaw. Chinensibus: ex Staunton in Macartney's Emb. 2. 467; cum Icone.

Sasanqua. Kæmpf. am. exot. 853. Ejusd. MSS. in mus. brit. fig. 25.

Thea oleosa. Loureiro coch. 339?
Frutex 8-pedalis. Ramuli alterni, laxi, rufescentes. Flores axillares & terminales, solitarii?, albi. *Cal.* 5-6 phyllus; foliola inæqualia, ovata, imbricata, corollâ multò breviora, decidua. *Pet.* 5-6, obovata emarginata v. brevî acumine, uncialia. *Fil.* plurima basi connata. *Caps.* dense villosa. (Thunb.)

The separation of CAMELLIA from THEA, although prior to the present prevailing caprice for frittering down useful genera into useless, appears to us too inexpedient, if not inconvenient, to be continued, especially since it is known that the filaments of the latter are at least partially connate. Were both to be retained, the present plant might have been perhaps more appropriately placed under THEA. It is of recent introduction into Europe, having been first received from China (to which it belongs as well as Japan) in 1811, by the Court of Directors of the E. I. C. in the Cuffnells, Capt. Wellbank. We believe it first flowered in the conservatory of Sir Joseph Banks, after whose Lady it has been named in the late edition of the Hortus Kewensis. Our drawing was made from a plant that flowered last autumn in Mr. Griffin's collection at South Lambeth; but

which we had not an opportunity of inspecting for description, after Mr. Edwards had drawn it. It is of quick growth, attaining the height of about 8 feet, smaller in all parts than *japonica*, but larger than *THEA*, with round branches of a brownish red colour, deciduously villous, pliant, and weak. The number of petals is very variable, as well as the indentation of their circumference. We have extracted the following notice of it from Sir George Staunton's account of Lord Macartney's embassy to China. "A plant
"very like the tea flourished, at this time, on the sides and
"the very tops of mountains, where the soil consisted of
"little more than fragments of stone, crumbled into a sort
"of coarse earth by the joint action of the sun and rain,
"The Chinese call this plant cha-whaw, or flower of tea, on
"account of the resemblance of one to the other, and be-
"cause its petals, as well as the entire flowers of arabian
"Jessamine (*the subject of the first article of the present*
"*work*), are sometimes mixed among the teas, in order to
"increase their fragrance. This plant, the cha-whaw, is
"the *Camellia sasanqua* of the botanists, and yields a nut,
"from whence is expressed an esculent oil, equal to the
"best which comes from Florence. It is cultivated on this
"account in vast abundance; and is particularly valuable
"from the facility of its culture, in situations fit for little
"else." We cannot help suspecting that the *THEA oleosa*
of Loureiro, which he tells us grows wild about Canton, is the same plant, although he calls its peduncles three-flowered, probably meaning that they grow three together; a circumstance that does not square with Thunberg's account of *Sasanqua*, nor with the figure in Sir George Staunton's work, nor with the plant at Mr. Griffin's; yet we were told, that at Sir Joseph Banks's, two and three flowers were certainly produced from the axils of some of the leaves. Loureiro says the oil is used for lamps, as well as for culinary purposes; but that it is inferior to olive-oil. The plant belongs to the greenhouse, and will soon be common; but is far inferior to *japonica* in beauty. Thunberg says that the chinese women use a decoction of the leaves to wash their hair.



Syd^m Edwards Del. Pub by J Ridgway. 170 Piccadilly April 1 1845.

PASSIFLORA laurifolia.

Laurel-leaved Passion-flower or Water-Lemon.

MONADELPHIA PENTANDRIA.

PASSIFLORA. Cal. inferus, basi urceolatus, limbo 5-partito magno colorato, laciniis sub apice mucronatis, simul cum corolla marcescentibus. Cor. 5-petala, calyci inserta. Corona interior ex imo calycis limbo enata sub petalis, colorata multipartita laciniis numerosis filiformibus radiantibus v. erectis; duplex intus altera corona conformis sed brevior & depressior urceolo inserta; intima sæpè circa stipitem centralem connivens. Germ. stipiti erecto insidens; styli 3, clavati; stig. 3, capitata. Stam. summo inserta stipiti sub germine, fil. basi breviter connatis, ultra distinctis horizontalibus; anth. oblongæ incumbentes. Bacca carnosa cortice interdum solido, formâ & mole varia, lævis, raro pilosa, 1-loc. polysperma receptaculo seminifero triplici parietibus affixo; sem. numerosa compressa, arillata arillo membranaceo pulposo; embryo planus albumine carnoso tectus. Herbae scandentes, interdum lignosæ; folia alterna stipulacea, simplicia, integra v. lobata v. rariùs partita petiolo nudo v. utrinque glanduloso; cirri axillares; pedunculi 1-3 axillares 1-flori, infra calycem plerumque articulati, involucri ad articulum sæpè triphyllò v. 3-partito lac. integris v. rariùs dissectis, interdum minimo v. 1-folio v. nullo. Jussieu. gen. 397.

P. laurifolia, foliis indivisis, ovato-oblongis, acuminatis, venosis, nervo uno longitudinali, glabris, in summo petiolo 2-glandulosis, subundatoplanis.

Passiflora laurifolia. Lin. sp. pl. 2. 1356. Amæn. 1. 220. t. 10. f. 6. Mill. dict. ed. 8. n. 16. Jacq. obs. 1. 35. hort. 2. 76. t. 162. Swartz. obs. 333. Cavan. diss. 10. 454. t. 284. Sowerby in Linn. trans. 2. 24. t. 4. f. c. Willd. sp. pl. 3. 609. Schneevogt. ic. 38. Miss Lawr. passionfl. Hort. Kew. 3. 307. ed. 2. 4. 148.

P. foliis ovatis, petiolis biglandulis, bacca molli ovata. Browne. jam. 327.

P. arborea, laurinis foliis, americana. Pluk. alm. 282. t. 211. f. 3; (absque flore.)

Clematis indica, fructu citriformi, foliis oblongis. Plum. amer. 64. t. 80.

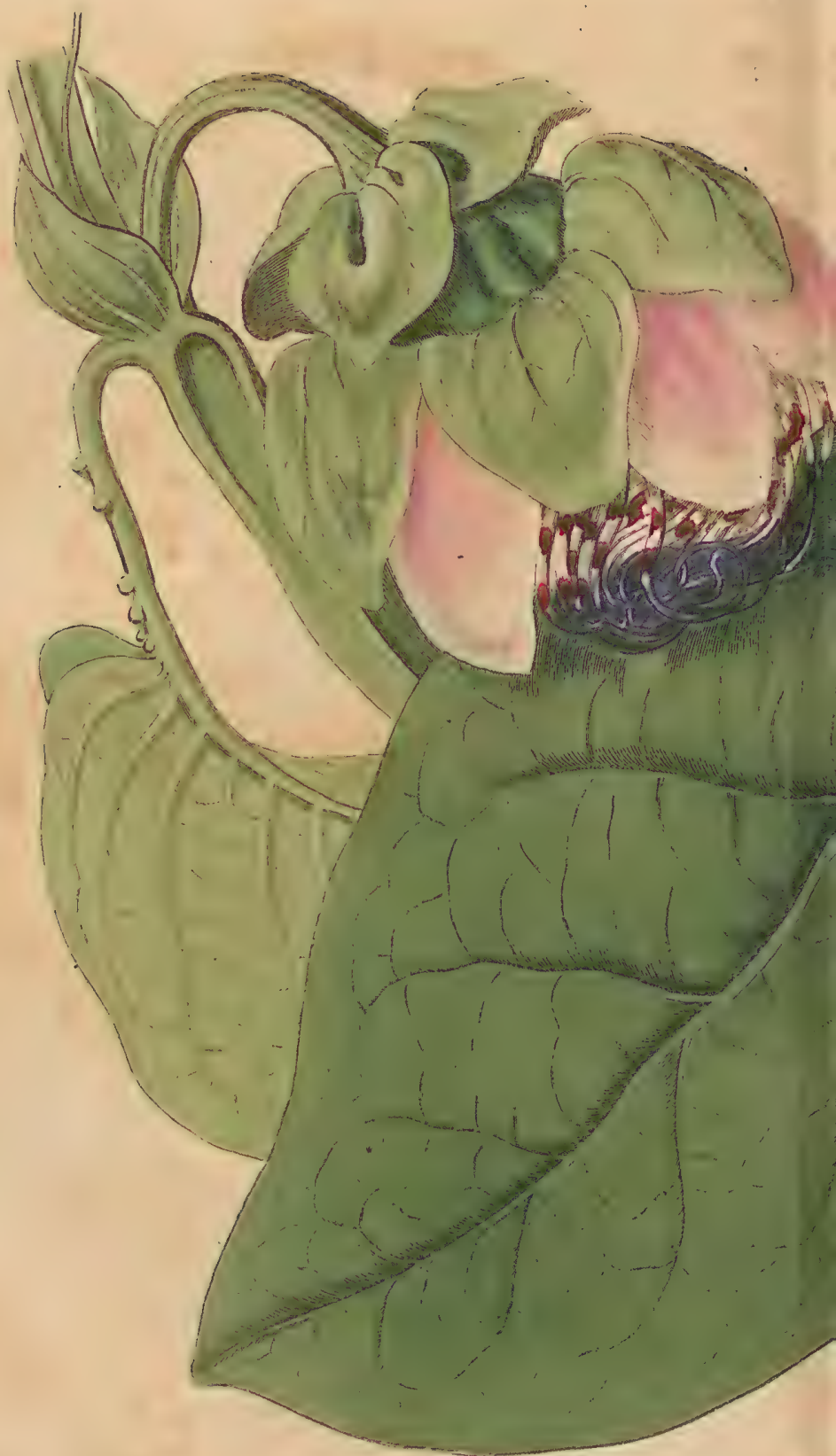
Marquiaas. Merian. surinam. 21. t. 21.

Fruticosa, 3-orgyalis & ultra, diffusè ramosa, tota glabra; rami teretes. Folia 2-4 uncias longa, 1-2 lata, saturatè viridia, integerrima: petiolus brevis: stipulae 2 setaceae: cirri axillares, longi. Pedunculi solitarii, longitudine petioli, infra teretes, indè triangulosi. Flores fragrantès, subbiunciales, cernui, reflexi. Involuc. 3-phyllum, flori subaequale; fol. latè obovata, concava, supernè serraturis & glandulis marginata. Pedicellus tereti-attenuatus. Cal. fol. lanceolata, mucrone incurvo extus sub apice, corollae concolora. Cor. pet. his similia sed mutica et angustiora, sanguineo-punctulata. Corona 3-plex, annulis purpureis variegata; radii exter. ferè bis breviores, reclinati, teretes, supernè compressi, apice abrupto eroso; medii erecti, obtusuli; inter. rudimenta brevissima sine ordine sparsa. Circa columnam areola plana cavitatem

nectariferam in fundo urceoli operiens. Bacca viridi-lutescens, albo-punctata, mole & ferè formâ ovi gallinacei, glabra lanuginosave, obsoletè & rotundatè trigona. Semina compresso-cordata.

One of the oldest stove-plants in our collections, having been introduced from the West Indies by Mr. Bentinck, afterwards Lord Portland, in 1690. It has been found wild by Plumier and Jacquin in the Island of Martinique, growing only in the closest groves and thickets, where it winds itself round the trees for support. According to Swartz and Miller, it is known among the english colonists in the West Indies by the name of "the Water-Lemon:" Jacquin and Browne say by that of "the Honeysuckle;" the latter attributing the former appellation to *maliformis*, a closely allied species. Among the french colonists the fruit is included in the denomination of "Pommes de Lianes." This is nearly of the form and size of a smallish Lemon, yellow spotted with white, having a soft leathery rind, enclosing a mass of separate brown flattish cordate cohesive seeds, each coated by a thick pulpy membrane constituting the esculent portion of the fruit, much as the case is with the Pomegranate. The pulp is watery and sweetish, of a pleasant taste, for the sake of which the fruit is eaten, as well as medicinally in fevers. When the rind is broken at the top, the eatable contents are obtained at once by a slight compression. The flowers are both fragrant and beautiful; the young foliage is of a bright tender green, gradually darkening till nearly black, in which it resembles, as well as slightly in shape, that of the Laurel. The way to grow the present, and indeed all the tropical Climbers, is to plant them in a border of earth formed round the inside of the bark-bed of the stove, and parted off from the tan by thick boarding down to the bottom of the bed: the whole to be backed by trellis-work for them to climb on. In this way they thrive in great luxuriance, and are made to form a bower, some part or other of which is in bloom nearly the year through. Propagated without difficulty by layers and cuttings. Our drawing was made at the Comtesse de Vandes's, Bayswater.

a A Ray of the outer circle of the crown. *b* One of the inner.



Syd. Edwards, del.

Printed by J. B. Colver



Young 170 Roccadilly April 1. 1845.

PASSIFLORA quadrangularis.

Square-stemmed Passion-flower or Granadilla Vine.

MONADELPHIA PENTANDRIA.

PASSIFLORA. Suprà fol. 13.

P. quadrangularis, foliis indivisis ovalibus subcordatis glabris, multinerviis, petiolis glandulosis, caule membranaceo-tetragono, stipulis ovali-oblongis. *Hort. Kew.* 3. 306.

Passiflora quadrangularis. *Lin. sp. pl.* 2. 1356. *Mill. dict. ed.* 8. n. 20. *Jacq. amer.* 231. *t.* 143. *pict.* 113. *t.* 218. *Swartz. obs.* 332. *Sowerby in Lin. trans.* 2. 21. *t.* 3. *f. a.* *Cavan. diss.* 10. 453. *t.* 283. *Willd. sp. pl.* 3. 608. *Miss Lawr. passionfl. Hort. Kew. ed.* 2. 4. 148.

P. foliis amplioribus cordatis, petiolis glandulis sex, caule quadrigono alato. *Browne. jam.* 327.

Caules fruticosi, supernè virides, subsimplices, crassi, membranaceo-tetraguetri. Folia subsemipedalia, cordato-oblonga, acuminata, integra, nitida: petiolus sæpius utrinque 3-glandulosus: cirri longissimi: stipulæ ovato-lanceolatae. Flos maximus, nutans, oblatus, patentissimus. Pedunc. triqueter. Involucr. 3-phyllum; fol. magna, ovalia, concava, basin versùs serrata. Pedic. teres, apice subattenuatus. Cal. fol. è disco subspongioso extrorsum extenuata, lata, lanceolato-elliptica, obtusa, mutica, intùs albo-rosea. Cor. pet. similia, sed tenuiora angustioraque. Corona 5-plex; radii exter. biseriati, suberecti, subexserti, tereti-subulati, flexuosi, albo-violaceo-variegati; inter. parvi, tuberculiformes, conici, in plano declivo sine ordine 4-5-seriati. Operculi rudimentum (pars speciei fortè propria) horizontale, partim in radios ab apice contra portionem incrassatam columnæ accumbentes dissectum. Operculum horizontale, introrsum à margine biseriatè & inæqualiter denticulatâ columnæ accumbens. Nect. in fundo cavo urceoli, à septo incompleto columnæ contrario transversè subbicameratum. Bacca magnitudine fermè ovi olorini, oblonga, elliptica, luteo-virens.

Much cultivated in the West Indies as an ornamental climber, especially for arbours and covered walks, for which it is eminently adapted by a rapid and extensive growth, beautiful and fragrant bloom, and broad deep green foliage. But as well as *laurifolia* of the preceding article, it is said to be peculiarly liable to be infested by the most noxious serpents, who haunt it for the sake of the mice and squirrels that feed upon the fruit, and are the favourite prey of these reptiles.—Jacquin never saw our plant but in a cultivated state. Swartz makes it a native of the woods in the West Indies. Yet neither he nor any author expressly states the having seen it, or even heard of its having been

seen, wild. It was cultivated in this country by Ph. Miller in 1760; and is pretty general in our hot-houses, where it sometimes ripens the fruit. This is nearly as large as, but more oblong than a swan's egg, with a thick soft spongy rind, smooth and of a dull yellow-green on the outside, lined within by a loose membranous sack filled with a mass of pulpy-coated seed. The sack is easily parted from the rind, and the pulpy contents are eaten at the dessert, mixed with wine or without. The pulp is watery, rather fragrant, and is said to have a grateful taste, something between sour and sweet (*aigre-doux*).—The bloom is the largest and handsomest of any species known to us; and is usually produced abundantly about August or September. We have mentioned in the preceding article what is esteemed the best mode of treatment for the tropical species of the genus. Our drawing was made at Bayswater, in the hot-house belonging to the Comtesse de Vandes; the richest, we believe, in plants of this family, of any in England.

a The Nectary: *b* its incomplete mid-partition. *c* The operculum or cover to the nectary. *d* The imperfect operculum: a part which is probably peculiar to this species. *e* The inner imperfect rays of the crown. *f* The double row of perfect rays of the same. *g* The column that supports the parts of fructification. *h* A stamen, *i* The germen. *j* The style and a stigma.



JASMINUM hirsutum.

Bright-leaved Indian Jasmine.

DIANDRIA MONOGYNIA.

JASMINUM. Suprà fol. 1.

J. hirsutum, foliis numerosis, cordatis, utrinque villosis, lucidis, ramis petiolis bracteis calycibusque hirsutis; inflorescentia umbellato-aggregata, pedunculis brevissimis, subtrichotomis.

Jasminum hirsutum. Willd. *sp. pl.* 1. 36. Vahl. *enum.* 1. 30. Smith. *exot. bot.* 117. t. 118. Hort. Kew. ed. 2. 1. 16. (Excl. passim allegatis Rheede, Ray, & Osbeck.)

J. pubescens. Willd. *sp. pl.* 1. 37. Vahl. *enum.* 1. 26.

J. multiflorum. Andrews's *reposit.* 496.

Nyctanthes hirsuta. Linn. *sp. pl.* 1. 8; (excl. syn.)

N. pubescens. Retz. *obs. bot. fasc.* 5. 9.

N. multiflora. Burm. *ind.* 5. t. 3. f. 1; (excl. syn.)

Caulis biorgyalis, lignosus, flexilis, teres, scandens, griseus, opposito-ramosus; ramuli teretes, virides, è villis copiosis hirti. Folia numerosa, interstitiis duplo longiora & pro genere densa, patentia, cordata, acuminata modò cum mucrone v. ramea nonnulla rotundata, saturatè viridia, nitida, nervosa, utrinque villosa sed juniora manifestiùs præsertim subtus & in nervis, ad summum 2 uncias longa & sesquiunam lata: petiolus incurvus. Flores ex apice ramulorum, in pedunculis curtis subtrichotomis quàm bracteæ linearilanceolatæ pluriès brevioribus cymoso-aggregati, 3-30, inter majores generis, nivei, odoratissimi. Calycis dentes subsepteni, longi, carinato-subulati, tubo breviores, erecti. Tubus crassius cylindricus, laciniis subæqualis v. longior: limbus ferè unciam transversus, sub 8-partitus, laciniis oblongis, basi cordatis. Anth. magnæ, oblongæ, luteæ, subsessiles, in tubo infernæ. Stigma tubo sub-emicans, clavato-oblongum, viridulum, pruinulatum.

Linnæus, in recording this plant by the present specific name, has adduced a false synonym, truly belonging to *GUETTARDA speciosa*; and had thus involved the species in an obscurity, that could never have been dispersed by his accompanying vague specific phrase; but which has been lately cleared up by a reference to the specimen in his Herbarium, made by the present possessor of that botanical treasure. By whom also the synonymy has been reformed, and completed by recalling to it the authors the mistake had misled. Among those usually cited, however, we have omitted Osbeck, who describes his plant as having undulate, elliptic-lanceolate, ovate leaves; by which he should seem rather to point to *undulatum*, another closely allied East Indian species, than to *hirsutum*. Dr. Roxburgh, among whose

unpublished drawings in the Banksian Museum is one of this plant, found it in the E. I. Company's botanic garden at Calcutta, where it was said to have been received from China. The Doctor subsequently ascertained it to be a native of Bengal. From him we learn that the flowers are sometimes near thirty in a bunch, and that even in those regions of beautiful plants it is in great request. The dark green shining foliage, which is the most abundant and thick-set of any of the simple-leaved species that we are acquainted with, covers whatever it grows against nearly as closely as Ivy, and forms a remarkable contrast to the snow-white blossom. This is exceeding fragrant, and shows itself about August, continuing to blow in succession for several months together. It does not turn to purple in the decay, as that of the Arabian Jasmine, nor is it so fugacious. The lower leaves of the flower-bearing branches are generally several times smaller than the others and rounded; the older leaves are often nearly naked, gradually shedding the pubescence that covered them. In the late edition of the Hortus Kewensis, by a mistake exceeding rare in that valuable work, the species is stated to have been cultivated by Miller in 1759, on the authority of the seventh edition of his dictionary; where indeed he has recorded a plant by the title of *NYCTANTHES hirsuta*; but which, upon critically examining his description, will be found really to be the *NYCTANTHES Arbor tristis*. The present plant is in fact of recent introduction, having been first sent from the East Indies by Dr. Roxburgh to Lady Amelia Hume. It is said to be easily multiplied by layers, and should be planted in the ground by the side of the bark-bed of the hot-house; a small spot on the outside of the bed will answer the purpose. Our drawing was made at the garden belonging to the Comtesse de Vandes, at Bayswater.

We should observe that the plant described by Vahl (*enum.* 1. 27) for *JASMINUM undulatum*, we take to be the present species, and not the Linnean *NYCTANTHES undulata*; and this opinion is confirmed by his quoting for it Burman's plant, which is the *JASMINUM hirsutum* and not the *undulatum*.

a The calyx. *b* The tube of the corolla deprived of the limb dissected to show the position of the stamens. *c* The pistil.



PITTOSPORUM undulatum.

Waved-leaved Pittosporum.

PENTANDRIA MONOGYNIA.

PITTOSPORUM. *Cal.* pentaphyllus, inferus, deciduus. *Cor.* pet. 5; ungues concavi, in tubum urceolatum conniventes; *laminæ* patentēs. *Stylus* filiformis. *Caps.* supera, subgloboso-angulata, mucronata, 3-loc., 3-valv.: *loculamentis* resinâ liquidâ scatentibus: *dissepimenta* valvulis contraria: *sem.* nonnulla, angulata. *Ex sched. Solandri in Mus. banks.* *Arbusculæ.* *Folia alterna v. sparsa.*

P. undulatum, foliis ovali-lanceolatis, utrinque attenuatis, undulatis, petiolisque glabris: pedunculis ramorum terminalibus, aggregatis, villosis, suprâ viscosis & sæpius divisis.

Pittosporum undulatum. *Andrews's reposit.* 383. *Ventenat. cels.* 76. *Hort. Kew. ed. 2.* 2. 28.

Arbuscula tripedalis & ultrâ, erecta, supernè verticillatim & corymbosè ramosa, cortice fusco demùm resinoso-pulverulento. Folia sparsa, juxta pedunculos approximata in apice ramorum, deflexa, uncias 4 v. magis longa, sesquiuam lata, tenuissimè reticulato-venosa, firmula, saturatè viridia, subtùs pallida: petiolus semuncialis vel ultrâ. Pedunculi plures, foliis subbreviores, sæpè trichotomi; pedicelli flore breviores, papilloso-nitentes, bracteolâ ad basin. Flores albidî, semunciales, odoratissimi. Cal. campanulatus, corollâ ferè bis brevior, ac pedicelli papulosus et viscosus, celeritèr emarcescens: foliola lanceolata. Cor. cylindraco-campanulata: pet. subspathulato-oblonga, striata; ungues in tubum conniventes; laminæ in limbum breviorē patulæ. Stam. duplo breviora, immediatè hypogyna, æqualia, erecta: fil. filiformi-subulata, stricta: anth. flavæ, sagittatæ, erectæ, introrsum dehiscentes. Pist. staminibus æquale, virens: germ. ovale, exsulcum, sericeum, biloc.? polyspermum resinâ liquidâ intùs madens: stylus ejusdem ferè longitudinis, crassiusculus, teres, atomoideo-papulosus, nudus, exsulcus, parum attenuatus: stig. obsoletè capitato-2-fidum,

This shrub was introduced by Sir Joseph Banks from New Holland in 1789. It is desirable on account of the great fragrance of the bloom, which is compared by some to that of Jasmine; to us it appears far stronger, but not so grateful. Monsieur Ventenat was misinformed, when he stated it to be a native of the Canary Islands. A thick strongly aromatic liquid exudes from the pores in the rind, congeals into a thin resinous coat, and at last breaks down into a whitish powder. Dr. Solander has compounded the generic name of two greek words, importing that the seed is covered with pitch or resin. The present is a hardy

greenhouse plant, and flowers from March to May. Multiplied by seed and cuttings.

The drawing was made at Messrs. Lee and Kennedy's, at Hammersmith.

a The calyx, as it separates before it falls. *b* A petal. *d* The pistil.



EPIDENDRUM nutans.

Nodding Epidendrum.

GYNANDRIA MONANDRIA.

EPIDENDRUM. Cal. 0. Cor. Pet. 5, oblonga, patentia. *Labellum* basi ecorne, tubulatum, columnam amplexens, lamina erecta, patula. *Columna* germini teretiusculo infero imposita, gibba, apice supra foveam adfigens *Antheram* 2-4-locularem, singulo loculo includentem *Corpuscula pollinis* 1-4, pedicello communi anticè inserto, affixa. *Stig.* ante foveam *Antheræ*, concavum. *Caps.* oblonga, 3-gona, 1-locularis, 3-valvis. *Sem.* numerosa, minutissima, subrotunda; *Arillo* scobiformi induta. *Swartz. Fl. ind. occid.* 3. 1485. *Herbæ perennes, parasiticae.*

E. nutans, caule simplici, foliis ovato-lanceolatis amplexicaulibus, floribus subspicatis nutantibus, lamina labelli triloba, lobo intermedio tridentato. *Swartz Nov. Act. ups.* 6. 68. *prod.* 121. *flor. ind. occid.* 3. 1499. *Willd. sp. pl.* 4. 117. *Hort. Kew. ed.* 2. 5. 219.

Radices crassæ, filiformes, longæ, albidæ. Caulis (nunc plures aggregati) 1-2 pedalis, crassus, simplex, foliosus, subteres, suberectus, s. arboribus horizontali situ adnascens. Folia sessilia, vaginantia, amplexicaulia, alterna, obliquè patula, ovato-lanceolata, acuta, plana, subtùs levissimè carinata, integra, lineata, glabra, subcoriacea. Vaginæ foliorum caulem arcuè cingentes, teretes, lineatæ, glabræ, rubicundæ. Pedunc. terminalis, solitarius, longitudine ferè foliorum (*spithameus*), compressiusculus, vaginis aliquot remotis lanceolatis albido-purpurascensibus munitus, glaber. Flores terminales, subspicati, approximati, 20-30, sessiles, majusculi, lutei, spicam nutantem referentes. Bracteæ lanceolato-lineares, carinatæ, longit. sæpè germinis, pallidæ. Pet. 5, isometra, patula: 3 exter. ovato-lanceolata, acuta, lateralia, subfalcata, planiuscula, integra, elevato-striata, extùs luteo-rufescentia: 2 inter. lineari-acuminata. Labellum columnæ basi adnatum, amplexens. Lamina horizontalitèr deflexa, 3-loba; lobis lateralibus ovatis, integris, convexis, intermedio 3-dentato: dentibus lateralibus cornuum instar erectis, medio deflexo. Calli 2 propè faucem, undè ad apicem lobi intermedi sulci 3 elevati. Columna labello brevior, erecta, teres, apice dilatata, marginibus biloba. Anth. 4 loc. in foveâ apicis columnæ, corpuscula solitaria oblonga, pedicellata tegens. Caps. oblonga, 6-carinata, magna. *Swartz.*

Native of the mountains of the western side of the Island of Jamaica, where it grows (as the generic name implies) on trees, striking root in the fissures of their bark. First brought to England by Admiral Bligh, in 1793.

The cultivation of tropical parasitic vegetables was long regarded as hopeless with us; it appeared a vain attempt to find substitutes for the various trees each species might affect, within the limits of the hot-house. But experience

has shown, not only that they succeed as easily as any other plants from the same climate; but that, from the little space they occupy, they are peculiarly suited to the stove, for which their curious structure and beauty render them most desirable acquisitions. We are told they should be planted superficially in proportionate pots of hazel-loam, and placed on the shelf or the flue of the hot-house, but never plunged into the bark-bed.

The genus is of Jussieu's natural order of Orchideæ, rearranged a few years since with great perspicuity and judgment by the learned Dr. Olof Swartz; and still more recently revised and enlarged by Mr. Brown, in his *Prodromus of the Flora of New Holland*, with the accuracy for which he is justly praised. The bloom of this species is of a lemon-colour, darkening as it decays to a reddish brown; the spike is constantly bent on one side, and offers a characteristic name for the species. The whole plant measures from one to two feet in height. It has been elaborately described by Swartz, among many others of the same tribe, in his *Flora Indiæ occidentalis*.

The drawing was made at the nursery of Messrs. Lee and Kennedy, at Hammersmith, in February last.

a The upper part of the shaft of the fructification, showing the 4 oblong parallel pollen-masses, as they present themselves, on the removal of the lidshaped moveable anther from the aperture of the cavity in which they have been formed: magnified. *b* The pollen-masses withdrawn from the cavity: magnified. *c* The same in a different position, showing their granulate filiform pedicles: very much magnified. The moveable lidshaped anther, frontwise: magnified. This forms the brown spot seen at the apex of the shaft in the flower. *e* Its converse, with the base of the partitioning of its four cells: magnified. *f* Stigma: magnified.





BEAUFORTIA decussata.

Cross-leaved Beaufortia.

POLYADELPHIA ICOSANDRIA.

BEAUFORTIA. (*Cal.* turbinatus, 5-fidus. *Cor. pet.* 5, calyci imposita). *Staminum phalanges* 5, petalis oppositæ. *Antheræ* basi insertæ: apice bifidæ lobis deciduis! *Caps.* 3-loc. monosperma, connata et inclusa calycis tubo incrassato basi adnato (ramo). *Brown in Hort. Kew. ed. 2. 4. 418.* Frutices. Folia sessilia, opposita, rariùs sparsa.

B. decussata foliis oppositis decussatis ovatis ovalibusve multinerviis, phalangium unguibus longissimis; filamentis radiantibus. *Brown. loc. cit.*

Caulis 3-4-pedalis erectus, è vittis striatus cuticulosus longitudinalibus post dilapsa folia per intervalla determinata cicatricum desquamantibus: rami villosi, teretes, subverticillati, numerosè et patulè sed non confertim foliati. Folia subsemuncialia, firma, duriuscula, obovato-v. elliptico-lanceolata, medio carinato-costata, nervis pluribus striata, opacè viridia, subtùs punctata, basi villosa. Flores binatim v. ternatim axillares, nutantes, in racemum numerosum cylindraceum summis ramis infernatem aggregati. *Cal.* tertiam partem unciae longus; segmenta acuta; tubus hirsutus. *Cor. pet.* limbo calycis æqualia, ovato-rotunda, concava, punctata, viridia. *Phal. stam.* 4-5, coccineæ, unciales, columellares, basi barbatae, suprà in filamenta antherifera triplo breviora secedentes: *anth.* crustaceo-tunicata, atosanguineæ, erectæ, à basi infixæ, de supernè medio tenùs bifurco-didymæ lobis attenuatis divaricatis: loculi ambo introrsum infra furcam dehiscentes: pollen flavum. Germ. turbinatum hirsutum: stylus setaceo-filiformis, flexuosus v. contortuplicatus: stig. simplex.

A genus formed by Mr. Brown, and first recorded in the late edition of the Hortus Kewensis. It consists, as at present known, of four species, all natives of the South-west coast of New Holland, two of which are already in our gardens. Comes very near to *MELALEUCA*: but has a one-seeded three-celled capsule, and anthers that are inserted at the base, and divided above into two lobes. The present species has grown in our collections to the height of nearly five feet: the branches few, situated far up on the stem, subverticillate; as well as that striped by four broadish longitudinal cuticular fillets, which at last scale off by determinate portions, parting at the base upwards, within the intervals of the scars left by the fallen foliage. The inflorescence is produced below the branches, and owes its beauty to long scarlet stameneous shafts, branching at the

head into distinct filaments, four or five of which project from each small green and nearly unseen corolla. The foliage is harsh, of a dull opaque green; each leaf about half an inch long and the third of one broad. The pollen issues from the inner side of the cells from below, to within the fork of the anther.

Discovered by Mr. Brown. Introduced by Mr. Good in 1803. A greenhouse plant; requiring a mixture of loam and peat-mould to grow in.

Our drawing, the first published of any species of this genus, was made in February last, from a plant that flowered at Mr. James Dickson's, nurseryman in Acre-lane, leading from Clapham to Brixton.

a An entire flower. *b* One of the five stamincous shafts bearded at the base within. *c* A petal of the corolla. *d* The pistil with its hirsutely crowned germen. *e* An entire anther, with part of the filament: magnified. *f* The same as it bursts and ejects the pollen.



GNIDIA pinifolia. α .*White fir-leaved Gnidia.*

OCTANDRIA MONOGYNIA.

GNIDIA. *Suprà fol.* 2.

G. pinifolia, foliis sparsis, acerosis, carnosulis, floralibus plurimis lanceolato-extenuatis, capitulo brevioribus; corolla extùs villosa, squamulis 4 sericeo-hirsutis limbum stellato-decussantibus.

Gnidia pinifolia. *Lin. sp. pl.* 1. 512. *Berg. cap.* 122. *Mill. dict. ed.* 8. n. 1. *Thunb. prod.* 76. *Willd. sp. pl.* 2. 424; (*excl. Lin. suppl. cum sectione ultimâ adjectæ notæ, & Wendl. quoad locum cit.*). *Andrews's reposit.* 52. *Hort. Kew. ed.* 2. 2. 412.

G. radiata. *Wendl. obs.* 15. t. 2. f. 12.

Rapunculus foliis nervosis linearibus, floribus argenteis non galeatis. *Burm. afric.* 112. t. 41. f. 3.

Valerianella æthiopica frutescens, Rosmarini folio, fl. albo. *Seba. thes.* 2. 32. t. 32. f. 5.

(α) flos candidus: squamulæ laciniis 3-plo minores.

(β) flos sub-ochroleucus: squamulæ laciniis subæquales.

Frutex proliferus, pedalis, vix culmo avenaceo crassior, glaber, infernè cicatrizatus, indè numerosè sparsim & patentèr foliosus; rami subsimplices. Folia 3 partes unciae longa plus v. minus, rigida, linearia, obesiùs carinato-triquetra, à supino planiuscula, à prono carinato-convexa, mucronata, brevissimè petiolata; floralia plurima, bis-ter latiora, erectiuscula v. radiato-verticillata. Flores plurimi, sessiles, apice ramorum aggregati. Cor. tubata, gracilis, subuncialis; tubus in faucem parùm dilatatus, obtusè quadrangularis acutè tamen in frustro germinitego infra articulum, ubi etiam glaber; limbus cruciato-explanatus, intus nudus; lac. oblongæ, obtusulæ, tubo 2-3 breviores; squamulæ petalodes, concolores, oblongo-lanceolatæ. Fil. adnata: anth. fulvæ, oblongæ, 4 emicantes præcociiores, 4 delitescentes. Germ. glabratum, ovatum, basi angustatum; stylus situ laterali generis, imas antheras non attingens: stigma hispidum.

A native of the Cape of Good Hope, cultivated in the Chelsea physic-garden, by Philip Miller, in 1768. The bloom is of a pure white, with little scent during the day, but sweet by night. We have never seen a plant of it more than a foot high. The foliage reminds us of that of some of the firs, and is much more numerous and close in the spontaneous specimens we have seen, than in the garden ones. Requires to be kept in the greenhouse; will do with the same treatment as the hardier Cape-shrubs; and is readily increased by cuttings. Blooms freely in February and March, and lasts long in flower. The *GNIDIA pinifolia*

of the Supplementum of the the younger Linnæus, inserted among the synonyms of the present by Willdenow, is evidently a very distinct species, having only two, and those axillary, flowers at the end of each branch. This has been recorded by Gmelin (*Syst. nat.* 7. 33.) under the name of *GNIDIA acerosa*, and in Dr. Martyn's edition of Miller's Dict. under that of *GNIDIA Sparmanni*. Wendland's *pinifolia* is the *imberbis* of the last edition of the Hortus Kewensis; and his *radiata* is the present species.

The drawing was made at the nursery of Messrs. Colville, in the King's Road, Chelsea.

a A detached flower. *b* The pistil; showing the lateral position of the style on its germen. *c* A flower cut open vertically, showing the 4 petal-like glands that intervene between the segments of the flower, and likewise the situation of the 8 stamens. (All slightly magnified.)



apt Edwards del

Sub by

J. Ridgway 170 Piccadilly May 1.

1855

Smith Jr.

PROTEA pulchella.

Waved-leaved Protea.

TETRANDRIA MONOGYNIA.

PROTEA. Cor. bipartibilis, inæqualis, labii latioris laminis stamini-
feris cohærentibus. *Anth.* apicibus concavis corollæ immersæ. *Squa-*
mula 4 hypogynæ. *Germ.* 1-spermum. *Stylus* subulatus. *Stig.* an-
gustius, cylindraceum. *Nux* undique barbata, stylo persistenti caudata.
Recept. commune, paleis abbreviatis persistentibus. *Involucr.* imbric-
atum, persistens.

Frutices modò proceriores et quandòque arborescentes, modò suba-
caules. Folia integerrima. Capitula terminalia, rariùsve lateralìa:
Receptaculo planiusculo, nunc convexo, sæpissimè glabro, paleis quan-
dòque connatis alveolato: Involucro magno; colorato, turbinato v.
hemispharico: Corollæ labio latiore sæpè 2-3-aristato. Brown in trans.
linn. soc. 10. 74.

P. pulchella, foliis lineari-lingulatis marginatis nitentibus scabriusculis,
ramis parùm tomentosus, involucri bracteis interioribus apice lanceolato-
dilatato sericeo marginibus nigro barbatis, corollæ aristis vix longitudine
laminarum, stylo pubescenti. Brown. loc. cit. 81. Hort. Kew. ed.
2. 1. 189.

Protea pulchella. Andrews's reposit. 270. Folia opaca margine ciliata.
Protea speciosa. Var. fol. glabris. Andrews's reposit. 277. Folia
margine concolori.

Protea pulchella. Var. *speciosa.* Andrews's reposit. 442. Figura
bractearum interiorum diversa, aristis corollæ laminâ longioribus.

Caulis mollissimè villosus. Folia coriacea, rigidiuscula, numerosa, nec
conferta, sparsa, patentia, elongato-oblonga, 3-4 uncias longa, ab 1 tertia
parte ad 2 tertias uncias lata, venosa, laxiùs subundulata v. potiùs subflexuosa,
atomoidco-scabrata, ciliata v. nec, modò à supino versus basin villosa, cæterum
nuda, utrinque parùm attenuata, acumine brevi. Capitulum erectum, soli-
tarium, turbinato-cyathoides, folia excedens: invol. incarnato-rubens, extùs
sericeum; bractee inter. elongato-spathulatae, intùs glabratae, barbâ densâ
effusâ proluxiori nigrâ in summâ margine. Corollæ 3-unciales, extùs mol-
lissimè hirsutæ, biaristatæ, Stig. subulato-attenuatum, apiculò calloso.

This pretty shrub was found by Dr. Roxburgh, on the
mountains in a district of the Cape of Good Hope, called
Stellenboch. Not having had the opportunity of examin-
ing the plants, we have followed Mr. Brown in enumerat-
ing the above synonyms as of varieties of the same species.
The involucre, which surrounds the numerous corollas of
the inflorescence, constitutes the beauty of the plant. In
our specimen some few of the upper leaves had a pink

cartilaginous edge; the rest, however, an edge of the same colour as the disk. Introduced by Mr. Masson in 1795. It is said that plants of it have flowered the third year from seed. Propagated by cuttings. Of easy cultivation; requiring, however, the shelter of a greenhouse, and to be planted in light loam mixed with a large proportion of sand.

The drawing was made at the nursery of Messrs. Lee and Kennedy, at Hammersmith, in March last.

a The broad lip of the corolla, formed by the coherent laminæ, 2-awned. *b* The opposite lip, of one lamina. *c* The stigma, *d* The pubescent style. *e* The stigma: magnif. *f* Three of the stamens, as they are situated in the cavity formed by the laminæ of the united upper lip: magnif. *g* The fourth stamen, as situated in the narrow lip.



Pub. by J. Ridgway 170 Piccadilly May 1 1815.

J. & A. Edwards del.

ELICHRYSUM proliferum.

Sprouting Elichrysum.

SYNGENESIA POLYGAMIA SUPERFLUA.

ELICHRYSUM. Flores tubulosi, marginales pauciores fœminei. *Cal.* imbricatus inæqualis, squamis scariosis, interioribus disco longioribus membranaceis nitidis, radium coloratum constituentibus. *Recept.* nudum. *Pappus* plumosus v. pilosus. *Suffrutices*; folia alterna, sæpè tomentosa; flores terminales; calyx persistens; squamæ radiales colore variæ; habitus GNAPHALII. Jussieu. gen. 179; sub XERANTHEMO, suppressis ELICHRYSO alienis.

E. proliferum, caule ramosissimo, argenteo-tomentoso, ramo omni ramusculis crebris foliaturâ obesâ minutâ loricatis obsito.

Elichrysum proliferum. Willd. sp. pl. 3. 1905. Hort. Kew. ed. 2. 5. 22.

Xeranthemum proliferum. Lin. sp. pl. 2. 1202. Berg. cap. 272. Houtt. nat. hist. der pl. 6. 72. t. 51. f. 2. Thunb. prod. 152. Andrews's reposit. 374.

X. afric., imis *Gnaphalii* foliis, supernis verò cupressinis teretifoliis, fl. maximo Persicæ colore. Pluk. am. 213. t. 442. f. 4.

Elichrysum Abrotani fœminæ foliis. Breyh. ic. 28. t. 17. f. 1.

Frutex prolifer, erectus, divaricatè ramosissimus, elastico-rigens; caulis & rami teretes, candicantes, subaphylli, ramulis numerosis curtis imbricatifoliolosis undique velut veprecula spinis consiti. Folia plantæ adultæ ramea sola, vix lineam excedentia, coriaceo-crassa, subconica, obtusa, à dorso viridia nitida nudiuscula, à supino pubescentia, imbricato-appressa, omnium singulorum emisso sub axillâ ramulo deciduum: plantæ anno junioris alia diversa caulina mollia numerosa patentia spathulato-oblonga, tomentoso-albicantia, uncialia, sensim decrescentia, itidem in axillâ ramifera; obtinent quoque similia in uno aut et altero ramo inferiori, nec ultrâ. Flores in ramis ultimis terminales, solitarii, ampli, purpurei. Cal. infrâ hemisphæricus, tomentoso-squarrosus, suprâ glabrato-radiatus, foliolis interioribus lineari-lanceolatis. Flos discoideus, planiusculus, griseus. Flosc. cylindrici, purpureo-fusci, 5-dentati. Masc. stigmatè 0; germine glabro. Fem. similes, peripherici; stigmatè exserto, bifido; germine hirsuto. Pappus utrique similis, flosculis æqualis, è pilis capitato-plumosis; in feminis copiosior. Recept. depresso-convexum, nudum puncticulatum. Polygamie necessaria planta.

Throughout this genus, the beauty of the inflorescence is in the calyx. This being of a scariose substance, and enduring for years with little change, has been the cause that our plant has been admired upon the shelf of the Botanist, and among the figures of his books for at least half a century before it reached his garden. As an "ever-lasting" for the winter-boughpot, Linnæus proclaims it

without an equal, "sine pari pro flore perennante." Its branches are very elastic, and have the appearance of frosted silver, from a dense white nap that covers them. Within the first year's growth, the stem is observed to put forth numerous hoary oblong-spatulate and linear leaves, decreasing from an inch to scarcely two lines in length. Similar ones are also borne by one or two of the lower branches, but all disappear after or before the end of the first year, none such being reproduced, nor indeed any of any sort on the stem and principal branches. Each leaf of the adult plant produces from its axil a short branch, similar to that on which itself was first produced, then falls off, thus forming the most bushy shrub of the genus. An entire flower of the preceding year is almost always found faded, but not decayed, in the fork of the flowering branches of the present. Plukenet is the only author, who seems to have noticed the difference of the primary leaves from that of the succeeding ones. The plant is peculiarly subject to be destroyed by the damp of winter-fogs; and should be kept in the most light and airy part of the greenhouse that can be selected. It thrives best in black sandy peat-mould. Native of the Cape of Good Hope, where it is found on the tops of the mountains. Introduced by Mr. Masson in 1789.

ELICHRYSUM at present consists of the shrubby species formerly included in XERANTHEMUM; from the herbaceous ones of which it has been detached by Willdenow, as differing in character, by a receptacle not clothed with chaffy bractes; but naked, and by a pappus not of chaffy bristles; but of simple or else feathered hairs.

The drawing of the flowering branch was made at Messrs. Colville's nursery; that of the separate leaf and branches, in Mr. Creswell's conservatory, Battersea-Square.

a A vertical section of the flower. *b* A female floret in its place. *c* An inner leaflet of the ray of the calyx. *d* A male floret and smooth germen. *e* The same magnified. *f* A female floret and hirsute germen crowned by a more numerous pappus. *g* The same magnified. *h* One of the lowermost primary stem-leaves. *i* A lower branch of the yearling plant.



Lyle, Edwards. del.

Smith Sc.

Pub by J. Ridgway 170 Piccadilly May 1. 1845.

Kew Blank

CAMELLIA japonica. μ .
The Pompone Camellia or Japan-rose.

MONADELPHIA POLYANDRIA.

CAMELLIA. *Suprà fol. 12.*

C. japonica, ramis glabris, flexuosis; foliis elliptico-lanceolatis; corolla coriaceo-crassa, campanulata; staminibus cylindraceo-conniventibus; stigmatibus profundè discretis.

Camellia japonica. *Linn. sp. pl.* 2. 982. *Thunb. jap.* 272. *Jacq. coll.* 1. 117. *Hort. Kew.* 2. 460. ed. 2. 4. 235. *Willd. sp. pl.* 3. 842.

(α) Single red Camellia. *Curt. mag.* 42. *Cav. diss.* 6. 305. t. 160. f. 1. *Jacq. ic. rar.* 3. 553. *Schneevogt ic.* 7. *Duham. ed. N.* 243. t. 71.

Thea chinensis, pimentæ jamaic. fol. fl. ros. *Pet. gaz.* t. 33. f. 4.

Tsubakki montanus s. sylvestris, fl. ros. simplici. *Kämpf. am.* 350. t. 851.

(β) Semidouble red Camellia. *Andrews's reposit.* 559.

Rosa chinensis. *Edwards's Birds.* 2. t. 67.

(γ) Double red Camellia. *Andrews's reposit.* 199.

(δ) Middlemist's red Camellia.

(ϵ) Myrtle-leaved red Camellia. *Curt. mag.* 1670.

(ζ) Anemone-flowered, or Warrata'h Camellia. *Curt. mag.* 1664.

(η) Pæony-flowered Camellia. *Andrews's reposit.* 660. f. 1.

(θ) Double-striped Camellia. *Andrews's reposit.* 91.

(ι) Blush-Camellia. *Andrews's reposit.* 660. f. 2.

(κ) Buff-Camellia.

(λ) Double-white Camellia. *Andrews's reposit.* 25.

(μ) Pompone Camellia. *Suprà.*

Our variety (strictly a full one) having all the stamens grown out into petals, and the corolla filled by them something in the same way as that of the Pompone variety of the Provins-rose, which it approaches in colour, has been called by the gardeners the Pompone-Camellia; and is, we believe, the last imported.

This fine evergreen shrub, in all its varieties, is the produce of China and Japan, where it forms a chief feature of every garden and grove. It is said to attain the size of a considerable tree, with a short *trunk*, dividing into numerous spreading branches; *leaves* substantial, alternate, shortly petioled, elliptically ovate, acuminate, serrate, shining; *peduncles* 1-flowered, terminal, generally solitary, sometimes

2-3; *calyx* herbaceous, imbricate, with about 9 broad ovate deciduous *leaflets*; *petals* 5-7, round, flat, emarginate, longer than the calyx, substantial, fleshy, grown together by an extended base; *filaments* very many, grown to each other at the base and to the concrete part of the corolla, converging into a hollow cylinder, shorter than the petals; *anthers* roundish, yellow; *style* filiform, somewhat angular, length of the stamens; *stigmas* 3.

We have enumerated the eleven varieties of this species, as given in the last edition of the Hortus Kewensis, adding a twelfth. The common red one was first cultivated by Lord Petre in 1739. The single-flowered of this, now serves for little else than as the stock to ingraft or inarch the rare ones upon, most of which are of very recent introduction; and by their number prove the industry of the florist of the parts they come from. All will live in the open air in England, but the natural time of flowering falling in a season too inclement in these parts for the expansion of the bloom, they can never be seen in perfection in any place but the conservatory; where they thrive best when planted in the ground; and we are told the single red one has there attained the height of fifteen feet, with a head in proportion. We have never seen or heard of a single-flowered white variety. Loureiro, in his Flora of Cochinchina, has a *Camellia drupifera*, most probably not specifically distinct from *japonica*; this he describes as having white bloom. His description is however too vague to ascertain their specific identity.

The drawing was made in the nursery of Messrs. Lee and Kennedy, at Hammersmith, in February last.





Syll. Filumade del.

Del. by P. B. Gurney 170. Scudellus. May 1. 1815.

Smith del.

AMARYLLIS rutila.

Vermilion-flowered Amaryllis.

HEXANDRIA MONOGYNIA.

CAL. O. *Cor.* supera, nutans v. erecta, tubulosa 6-fida, infundibuliformis ad hexapetalodi-partitam rotatam; irregularis regularisve: laciniæ æquilongæ, similes, recurvæ v. rarò conniventes. *Fil.* inclusa, medio disco v. summo tubo insita, declinato-assurgentia, rarò erecta, rariùs conniventia. *Anth.* versatiles. *Stylus* inclinatus, corollæ æqualis. *Stig.* apex apertus v. 3 replicata. *Caps.* membranacea, oblongo-trigona v. oblato-sphæroidea & trisulca, 3-loc., 3-valv., valvis medio septigeris: semina biseriata, paleaceo-complanata, v. variè pressa, v. globosa, nunc unicum emollescente albumine bulboso-laxatum replens v. dilacerans capsulam.

Bulbus tunicatus. Folia crassiuscula, ab angustè ad latè lorata, ab uno paucisve bifariis ad plurima multifaria, post v. antè scapum venientia. Spatha communis scapum terminans, 1-bivalvis, 1-multiflora, floribus umbellatis sessilibus v. pedicellatis, bracteato-distinctis. Semina quarundam funiculo suo fungoso incrassato subarillato-immersa.

A. rutila, spatha subbiflora, celeritè arescente; floribus incluso-pedicellatis, nutantibus, breviter tubulosis; limbo turbinato obliquè ringente, laciniis 3 superioribus reflexo-conniventibus, inferioribus porrecto-divaricatis, imâ duplò angustiore, distantiore: fauce tubi nudâ.

Bulbus subrotundus, albus, miniato-maculatus. Folia 3-plurima, bifaria, subpedalia, sublanceolato-lorata, infrâ unciam lata, apice obtusula. Scapus extra folia, compresso-teres, glaucus, pedalis, crassitudine pennæ olorinæ. Spatha 2-valvis, pedicellis duplò longior, citò arescens, nec arrecta: Germ. oblongum, obtusè trigonum, tubo bis brevius, 3-striatum, viride, factum ovulis numerosis cumulatis complanatis. Cor. subquadriuncialis, in hiatu miniaticans, saturatiùs striata, fundo ochroleuco sexradiato: tubus subsemuncialis, trigonus, germiini æquicrassus: limbus turbinato-campanulatus, 2-labiatus; lac. elongato-lanceolata, undulata, 3 exter. latiores, carinata, mucronata, laterales 2 mediam summam versùs obliquata, inter. muticæ: ima media lincari-lanceolata, antrorsum directa. Fil. miniata, declinato-incurva, alterna plurimùm longiora, corolla verò 1 tertiâ parte breviora: antheræ sulphuræ, tandèm lunulato-curvata. Stylus crassior, miniatus, trigono-teres: stig. 3, profundius discreta, replicata, alba, teretia, obtusa, pube brevissimâ pruinata.

An unrecorded species, and not known in our collections, until very lately imported by Mr. Griffin, from whose botanical pursuits we have already derived the introduction of other new and curious plants. It was received by the way of Portugal, from St. Paul's in the Brazils.

Every one will perceive the close resemblance of our plant to *AMARYLLIS equestris* (*miniata* of the Flora peruviana); but on inspecting the interior of the tube of the corolla, the whole of this in *rutila* will be found to be completely smooth, while its mouth in *equestris* is always pubescent; the segments are also narrower and longer in the present species, the stigmas far more deeply separated, and the spathe dries quickly away, and does not remain upright and long unaltered as in the other. More distinctions will probably be detected on a comparison of the living specimens of the two. They are natives of opposite sides of the South American continent; *equestris* (*miniata*) being found in Peru, in woods and field-sides on the Andees; and is called by the spanish colonists *lacre de montaña*, or mountain-sealing-wax, in allusion to the colour of the flower. And it is said that where the bulb is cut, the part on exposure to the air becomes vermilion; and that the juice is used as an ink for the signature of the name to letters, having been found to acquire the same fine colour when dry. These circumstances most probably belong also to *rutila*; the flower of which is scentless; the vermilion on the inside sparkling and streaked with deeper coloured feathered lines; on the outside opaque suffused with pink and tinged partially with green and yellow; the funnel or throat within of a greenish white and six-rayed,

The drawing was made from a bulb that flowered with more of the same species in the dry-stove in Mr. Griffin's garden at South Lambeth, in March last,

a A lower portion of the corolla cut through vertically on one side and detached from the germen, to show the insertion of the stamens, and smooth tube. *b* The pistil when dissected from the corolla.



Lyth. Edwards, del.

Plt. by J. Ridgway, 170 Piccadilly, June 1 1815.

Smith Sc.

STYPHELIA longifolia.

Long-leaved Styphelia.

PENTANDRIA MONOGYNIA.

STYPHELIA. Cal. 5-partitus, bracteis 4 pluribusve texturâ calycis. Cor. elongato-tubulosa; tubo intus juxta basin fasciculis 5 villorum: limbo laciniis revolutis, barbatis. Fil. epipetala, exserta: anth. simplices. Germinis 5-locularis loculi monospermi. Drupa subexsucca, putamine osseo, solido.

Frutices erecti v. ascendentes, ramosi, glabriusculi. Folia sparsa, brevissimè petiolata, mucronata. Flores axillares, nutantes v. divaricati, speciosi, pedunculis unifloris, rarè 2-3-floris. Squamulæ hypogynæ 5, distinctæ, rarè connatæ. Brown. prodr. 537.

S. longifolia, foliis elongato-lanceolatis apice attenuatis suprâ concaviusculis margine lævibus, ramulis pubescentibus. Brown. loc. cit.

Caulis 3-pedalis, erectus, teres, numerosè sed non confertim foliosus, superne ramosus, badio-corticatus. Folia 2-uncialia, erecta, interstitiis plurimum longiora, rigidissima, angusta, lineari-attenuata, cuspidata fine pungente, concava, nervis parallelis densè striata, basi et in brevissimo petiolo villosa. Flores subnutantes, plurimi, virides. Pedunculi uniflori, in ramis superni, axillares, solitarii, breves, villosi, bracteis squamati. Cal. herbaceus, rigens, tubuloso-connivens, acutus, nervulosus, infra breviter cum corollâ (quâ duplo magisve brevior) conferruminatus. Cor. sesquiuncialis, pennâ corvinâ ferè duplo crassior, subdiaphana, extus glabra, intus nisi ubi recondit germen villosa: laciniæ limbi ligulato-lanceolatae tubo $\frac{1}{3}$ parte breviores; resiliunt hæcce sub dehiscentiam nisu elastico, indè in gyros plures revolvendæ. Fil. corollæ æqualia, tubum adnato-decurrentia, ob recedentem limbum exserta, conniventia: anth. fuscæ, à medio dorso appensæ, versatiles, secundæ. Germ. conicum, 5-gonum, basi cinctum squamulis 5 crateroidi-conniventibus: stylus capillaceus filamentis altior et plurimum gracilior: stigma capitatum.

A rare species, and one that has not found a place in the late edition of the Hortus Kewensis, nor been figured in any work: nor had we heard of its being in any collection, until we met with it in that of Messrs. Lee and Kennedy at Hammersmith, where the drawing was taken in March last, from a plant that had been raised from seed.

Native of New-South-Wales; found by Mr. Brown in the neighbourhood of Port-Jackson. It approaches in the colour of the flower to *viridiflora*, but is very different in the foliage, which in that is obovate-oblong, flat, and about one inch long; not, as in this, tapering from the base upwards, concave and about two inches long. It is a woody

shrub, with hard leaves. The plant we saw, was about three feet high, and leafless below the branches. Spontaneous specimens of both *longifolia* and *viridiflora* are preserved in the Banksian Herbarium.

Thrives in peat-earth, and requires to be kept in the greenhouse.

a The calyx sheathed at the base by imbricate bractes. *c* The pistil with the 5 small scales under the germen. *d* The germen and hypogynous scales: magnified. *b* The corolla dissected vertically, so as to show its pubescent interior, and the insertion of the filaments.



Edw. Edwards. del.

Plt by J. Ridgway 170

Locustville June 1, 1815.

Smith. Sc.

MIMOSA sensitiva.

The sensitive plant.

POLYGAMIA MONŒCIA.

MIMOSA. Hermaph. Cal. 5-dentatus. Cor. 0, s. 5-dentata. Stam. 8. Pist. 1. Lomentum in articulos monospermos secedens. Masc. Cal. 5-dentatus. Cor. 0, s. 5-dentata. Stam. 8. Willd. *sp. pl.* 4. 1028.

Arbores v. frutices suffruticesve, inermes aut ad basin petiolorum passimve aculeati; folia abruptè pinnata; flores capitati v. spicati, axillares terminalesve, regulares, quidam abortu masculi v. fæminei. Stam. distincta. Folia omnium vesperè contracta mane expanduntur, quarundam sensibilia nimis ad tactum comprimuntur & nutant. Jussieu. *gen.* 346.

M. sensitiva, caule petiolisque aculeatis, foliis conjugato-pinnatis, foliolis subdimidiato-ovatis acutis subtùs pilosis, intimis minimis. Willd. *sp. pl.* 4. 1030.

Mimosa sensitiva. Lin. *sp. pl.* 2. 1501. Mill. *dict. ed.* 8. n. 7. Trew. *chret.* 54. t. 95. Hort. Kew. 3. 439. ed. 2. 5. 455.

Æschynomene spinosa prima s. brasiliana latifolia, siliquis radiatis. Breyn. *cent.* 1. 31. t. 16.

Caulis lignosus, debilis, gracilis, striatus, axillaritèr ramosus, villosus, aculeis recurvis conspersus. Folia alterna, distantia, conjugato-pinnata pinnis bijugis: foliola inæquilatera, oblonga latere intimo rectiore, subtùs appresso-villosa, venosa, interius utriusque paris conforme sed maximè diminutum; petioli communes surrecti pubescentes semiteretes à supino striati, basi articulati stipulâ parvâ acuminatâ ad utrumque latus: partiales triplo breviores, stipulâ subulatâ porrectâ anticâ in articulo baseos alterâque posticâ pone furcam. Capitula purpureo-albicantia, pedunculata, in axillis foliorum superiorum sæpiùs gemina, petiolo breviora; suprema paniculato-producta. Cal. exiguus, quadrangulatus, 4-fidus, in pedicello brevissimo: quos coràm habuimus omnes hermaphroditi. Cor. 0. Stam. 4, longè exserta. Stylus lateralis.

The appellation of "the sensitive plant" having long since been very generally transferred in our gardens from the present species to the *MIMOSA pudica* or "humble plant," a small annual that occurs in almost every collection, where tender annuals are cultivated; this article may serve to recall to our readers the original owner of that name; a plant rarely seen in this country.

The extraordinary effect of the perceptibility of the present and other *MIMOSÆ*, has given rise to much speculation among physiologists, which however appears to have af-

folded no satisfactory or very interesting result. It is certain that when this plant is in health and growing in a sufficient degree of warmth, the leaves, upon being smartly touched, fold together by their leaflets, and their stalk sinks; the same change of position takes place spontaneously in them all every evening for the night; and the posture then assumed is, according to Linnæus, that of the sleep of the plant. A leaf that has collapsed either naturally or from artificial irritation, is perceived to resume its extended state by a gradual vibratory motion, compared by Miller to that of the index of a clock. The discovery of the end attained in this phænomenon is most probably reserved for a diligent attention to the economy of these vegetables on their native spot. The root of all of them emits a most offensive smell, resembling that from a sewer at the time of impending rain.

The species is marked in the Hortus Kewensis for biennial. Its stem is woody and brittle, and sometimes acquires the height of 8 feet; but must have support. Several new ones have been discovered in South America (of which country all are natives), by Messrs. Bonpland and Humboldt.

Native of the Brazils. Introduced in 1733 by Dr. Houston. Varies much in the size of the leaflets. The drawing was made from the only living specimen we have seen, and which had been raised from seed received from Jamaica, in the nursery of Messrs. Lee and Kennedy, Hammersmith.

a The calyx: magnified. *b* The same dissected, to show the insertion of the stamens: magnified. *c* The pistil; showing the lateral insertion of the style into the germen: magnified. *d* A flower-head, on which the bractes alone remain, with two unripe seed-vessels; which become *Lomenta* or jointed pods, parting transversely by one-seeded articulations.



Syd Edwards del.

Pub'd by J Ridgway Niccolini June 1 1815

CORRÆA speciosa.

Party-coloured Correa.

OCTANDRIA MONOGYNIA.

CORRÆA. *Suprà fol. 3.*

C. speciosa, foliis oblongis, obsolete ovatis, planis, apice rotundatis; corolla cylindrica, erecta; stylo infrà medium pilis radiato-penicillatis barbato.

Correa speciosa. Donn. cant. ed. 6. 100. Aiton's *Epitome*. 366. *Andrews's reposit.* 653.

Frutex habitu simillimus CORRÆÆ virenti (*suprà fol. 3*). Folia verò fusciora virentia obsolete ovata latius obtusata sublongius petiolata quàm in eâ, neque reflectuntur. Rami sæpius supernè trichotomo-triflori. Cor. non pendula, subsesquiuncialis, diametro pennæ scriptoriæ majoris, distinctissimè bicolor, infrà saturatè rosea, suprà brevius vividè virens, cæterum omninò virentis. Stam. parùm exserta; 4 breviora basi subspathulato-dilatata, concava, longiora infrà intus sulcata. Pili in stylo tenuiores et longiores: stig. viride.

In general habit this species strongly resembles the CORRÆA *virens* of the third article of this work, but has an upright brilliantly two-coloured corolla, and a pubescent style. It has been omitted in the Hortus Kewensis.

Native of New-South-Wales, where it was first found by Sir Joseph Banks and Dr. Solander. Introduced in 1804. Like the rest of the genus, yet known, in our gardens, it is a hardy greenhouse plant, and peculiarly suited to the border of a conservatory, where it flowers freely in March and April soon after *virens*; and, as well as that, is wholly without scent. A mixture of hazel-loam and peat-earth is what suits it best. Multiplied by cuttings, which strike easily.

We have seen specimens that have had a leaf with a somewhat depressed margin and convex disk; and others, as the present, where the leaf is entirely flat and slightly assurgent, in which the marginal indentation becomes more conspicuous.

The drawing was made at Mr. Knight's exotic nursery, King's Road, Little Chelsea, in March last.

a A detached flower. *b* A stamen. *c* The pistil.



Sp. Edwards, del.

Int. by J. Ridgway 1790. Privately June 1 1815.

London 24

PRUNUS japonica.

Double-flowered chinese plum-tree.

ICOSANDRIA MONOGYNIA.

PRUNUS. Cal. inferus, campanulatus, 5-fidus, deciduus. Pet. 5, ori calycis inserta, segmentis alterna. Stam. ibidem adnata sub petalis. Germ. 1. Stigma 1. Drupa: nux monosperma suturis prominulis. Arbusculæ; folia alterna, stipulacea. Interdum pologyna; quod forsàn lusus luxuriæ. Separatur à Jussæo in CERASUM, PRUNUM, & ARMENIACAM.

P. japonica, (inermis) foliis ovato-v. ovali-lanceolatis, duplicato-serratis, glabris; pedunculis geminis v. solitariis, striato-teretibus, folio duplo brevioribus: pistillo in medio villosa.

Prunus japonicus. Thunb. jap. 201. Willd. sp. pl. 2. 994.

Arbuscula glabra: rami teretes, cortice cinereo lucido. Folia decidua, petiolata, ultra unciam longa, protractius acuminata, immersè nervosa, venulosa: stipulæ 2, herbaceæ, lineari-subulatæ, serrato-dentatæ, petiolum æquantes aut excedentes. Flores albo-incarnati semunciam magisve transversî: pedunculi uniflori, semunciales, è gemmis modò sub ramulum aggregatis, modò solitariis huicque sublateralibus, rarissimè è centro gemmæ communis. Cal. pallidè virens, venosus, tubo brevi oblatè campanulato pentagono, segmentis recurvo-rotatis, ovatis, obtusis, serratis. Pet. subobovata, elliptica, acutula, basi angustata. Germ. viridia, gemina, rarè trina, vix unquam unicum: stylus albescens, subvillosus: stigma simplex.

It is now at least seven or eight years since this pretty flowered species first appeared in England; but we believe it has not been recognised till at present, from the time of Thunberg's notice of it in its native place. We met with the specimen, from a branch of which the drawing was made, in the conservatory appropriated to chinese vegetables, at the nursery of Messrs. Lee and Kennedy in Hammersmith; where it formed a small branching tree, about five feet high, and was covered with bloom by the beginning of April. The petals of the flower are somewhat multiplied, but not so as to destroy fertility; its small uneatable fruit being (as we were informed) perfected every year, and generally by pairs on each stalk, an effect probably of luxuriant variety.

Its introduction is due to the late Mr. Charles Greville, who received it from China, and was the first to cultivate it in his botanic garden at Paddington. We suspect that,

like many other chinese plants, it will be found sufficiently hardy to live in the open ground. At present being rare, it is kept in the conservatory. Seems to be of as easy cultivation and propagation as any of the common species of the same genus.

a The calyx deprived of the corolla, to show the stamens. *b* The calyx cut down and deprived of the corolla and stamens, to show the two pistils.



Syst. Edwards, del.

Det. by J. Ridgway Esq. Succubilly, June 1. 1812.

Smith, Sc.

CALENDULA *Tragus*. β .*Grey-leaved orange-coloured Cape-marygold.*

SYNGENESIA POLYGAMIA NECESSARIA.

CALENDULA. Recept. nudum. Flores radiati; flosc. centrales masculi, ambientes hermaphroditi; ligulæ fœmineæ. Cal. simplex, polyphyllus, æqualis. Sem. disci membranacea, marginalia diversa ab interioribus. Pappus nullus. Herba aut frutices. Flores sæpè solitarii terminales. Jussieu. gen. 183: mutatis nonnullis.

C. Tragus, caule suffruticoso, debili; foliis sparsis, ligulato-linearibus, ciliolatis, acumine brevi; seminibus suborbiculatis.

Calendula Tragus. Hort. Kew. 3. 271. ed. 2. 5. 168. Willd. sp. pl. 3. 2345.

(α) foliis carnosulis, firmulis, integris v. raritèr dentatis, virentibus, brevissimè villosis, hispidiusulis, subtus-elevato-puncticulatis, balsamicè odoratis; radio discolori, ligulis subplicato-striatis.

Calendula Tragus. Curt. mag. 408. Jacq. hort. schoenb. 2. 14. t. 153.

(β) foliis carnosulis, flaccidis omnibus integerrimis, ciliatis, nudis, (*ad lentem*) puncticulato-pruinosis, glaucissimis, inodoris; radio concolori, ligulis explicatissimis estriatis.

Calendula flaccida. Venten. malm. 20.

C. Tragus. β . Persoon. syn. 2. 492.

C. Tragus. Kœnig in Ann. of Bot. 1. 386.

Suffrutex vix lignescens, 2-4-pedalis, erectus, ramosus, debilis: rami axillares, teretes, laxè foliosi, in pedunculum longum 1-florum nudiusculum obsoletius striatum subvillosum tactui scabridulum producti. Folia sessilia, surrecta, 2-4 uncias longa, 2-4 lineas lata, obtusula cum brevi acumine, inferiora versùs basin attenuata; in ramis nondum floriferis in fasciculum approximata. Cal. virens, oblato-campanulatus, hispidulus: segmenta lanceolata, acuta, erecta, margine membranacea. Flores ampli, disco nigricantes. Flosc. radii steriles, totidem quot calycis segmenta, ligulâ oblongatâ, unciâ longiori, apice obtusatâ, angustissimè 3-dentatâ; tubus brevis, extùs è pilis brevibus articulatis villosus, germini inversè pyramidato triquetro æqualis: modò adsunt stigmata 2 linearia replicata in stylo brevi, modò desunt omninò. Flosc. disci numerosi, vix lineas 2 excedentes; arrecto-5-fidi, pubescentes; anth. fuscæ, emicantes; stigmata partim exserta fusca, in hermaph. recurvo-patentia, in masc. clavato-contigua: germina obcordato-complanata, membranaceo-alata, glaberrima, centri sterilia, periphæriæ fertilia. Recept. scrobiculato-punctatum.

Had we relied simply on our own judgment, we should probably, as well as Monsieur Ventenat, have separated this plant into a distinct species from *Tragus*, and said that it was intermediate between that and *oppositifolia*; ap-

proaching the latter by the form, colour, and surface of the foliage, and receding from it as to the position of the same; while on the other hand it agreed with the former in having a scattered and not opposite foliage, and differed again in the colour, form, and surface of that. But we have trusted probably to safer guides, in following the late edition of the Hortus Kewensis and Persoon's Synopsis Plantarum. In (α) the leaves are sometimes entire, sometimes indented, deep-green, firm, covered with a short somewhat hispid pubescence, roughened with small points like shagreen, and possess a balsamic scent, which Jacquin attributes to the flower, instead of them; the ray is of two colours, yellow or white within, purple without, and slightly plaited. In (β) the leaves are glaucous or grey, always entire, naked, ciliate, flaccid, smooth, and entirely scentless; the ray is of a uniform bright orange-colour, quite flat and plaitless. As to all other points the resemblance of the two varieties is certainly complete. The lower part of their stem is somewhat woody, and comes near in consistence to that of the common lavender-bush.

The present plant has been generally known in the nursery by the name of *CALENDULA aurea*, and is by far the most showy of the two; the flower, which sometimes exceeds 3 inches in diameter, opens in the morning, when the sun shines, but closes in the afternoon and on the approach of rain; this it will continue to do for many days in succession. When fully expanded, a passing cloud will disturb it. (α) was introduced by Mr. Masson in 1774, from the Cape of Good Hope. Of the particular origin of (β) we have learned nothing; it is stated generally, by Mons. Ventenat, to be native of the Cape of Good Hope. Both vary from 2 to 4 feet in height, and require support when in bloom.

A greenhouse plant of easy culture; flowers early in April; is increased by cuttings or slips, with nearly the same facility as the common pink.

The drawing was taken at the nursery of Messrs. Colville, in the King's Road, Chelsea.

a A floret of the ray and germen. *b* A fertile floret of the periphery of the disk and germen: magnified. *c* A barren floret from the centre of the disk: magnified. *d* A vertical section of the calyx, showing the pitted chaffless receptacle of the flower after the florets and germen are removed.



Rosa chinensis Desf.

Del. by J. Robinson. Col. by A. Smith.

June 1. 1811

Rosa chinensis

HIBISCUS heterophyllus.

Various-leaved Hibiscus.

MONADELPHIA POLYANDRIA.

HIBISCUS. (Cor. pet. 5. Stam. hypogyna in tubum corolliferum connata, indefinita: Fructus simplex multilocularis.) *Cal.* 5-fidus v. 5-dentatus caliculo polyphylo (5-30, rarissimè 3) aut multipartito cinctus. *Antheræ* in apice & superficie tubi. *Stylus* 1; *stig.* 5. *Caps.* formâ varia, 5-loc., 5-valv., loculis polyspermis, rarè monospermis. *Frutices* aut *herbæ*; *flores* axillares & terminales. Jussieu. gen. 273.

H. heterophyllus, foliis lineari-lanceolatis acuminatis plerumque lobatis, aculeato-serratis, calyce exteriori 10-phylo, caule fruticoso aculeatissimo. *Venten. malm.* 103.

Hibiscus heterophyllus. *Persoon. syn.* 2. 254. *Hort. Kew. ed.* 2. 4. 228.

H. grandiflorus. *Salisb. Parad. Lond.* 22.

Frutex procerior: caulis erectus, axillaritè ramosus, distantè foliosus, è tuberculis spinâ præfixis laxius echinatus. Folia alterna, semipedalia, cum petiolo erectiusculo articulata, divaricata, elongato-lanceolata, sæpiùs ex lobis 3-5 palmata, costâ mediâ nervos alternos obliquos antrorsum aculeolatos utrinque emittente: petiolus à supino hirsutus: stipulæ laterales, lanceolatae, angustæ, pubescentes, deciduæ. Pedunculi solitarii, axillares, 1-flori, crassi, teretes, erecti, petiolo breviores, è tuberculis densis stellato-setosis hispidi. *Cal.* inter. à pubescentiâ pedunculi exactè simili incrustatus, uncialis, ultrâ medium 5-fidus, urceolatus, segmentis lanceolatis extùs obsoletè elevato-trisulcis: exter. viridior, parùm brevior, parciùs penicillato-villosus; foliola semitereti-subulata, campanato-conniventia, basi distincta. Cor. grandis, tenuis, intùs albicans & partim purpurascens, extùs pubescens; areolâ disci atosanguinea, ubi cum tubo stamineo commissa barbata: lac. obovatae. Colum. staminea concolor disci, striata, subpubescens, maximâ suâ parte antheris pedicellatis onusta, 5-fida laciniis modo ramoso-divisis antheriferisque et caudatis: pollen primò luteum indè purpureum, è sphaerulis lævibus granulatum. *Stig.* lobiformia, replicata. Germ. oblato-conoideum, sericeo-hirsutum.

A native of New-South-Wales, where it grows to be a considerable-sized shrub, and is manufactured by the natives into a rude cordage, suited to their purposes. Independent of the handsome bloom, it is curious for the variety in the foliage, where the footstalk sometimes holds an undivided one-nerved leaf, but oftener a palmate one of 2, 3, or 5 lobes, and as many nerves, to be depressed or elevated from a joint at the top of the footstalk. The flowers are of short duration, and produced singly from the axils of the upper leaves. The plant was dis-

covered by Colonel Paterson on the banks of the Hawkesbury river; and first cultivated in this country by the late Mr. Charles Greville, in the conservatory of his botanic-garden at Paddington, in 1803. We have learned nothing in relation to its culture, or the modes of increasing it.

The drawing was made from a branch obtained for us by Messrs. Lee and Kennedy, of Hammersmith, in March last.

a The inner and outer calyx: and a magnified detached stellately bristled tubercle of the pubescence which incrusts the outside of the inner calyx. *b* The stameneous tube, containing the pistil. *c* One of the branching caudate segments that form the mouth of the stameneous tube, with two adhering anthers: magnified. *d* The style and stigmas, withdrawn from the stameneous tube.



Spl Edwards del.

Int. by J. Ridgway 170 Herbarily June 1. 1815

Smith. Sc.

GRISLEA tomentosa.

Downy-leaved Grislea.

OCTANDRIA MONOGYNIA.

GRISLEA. (Flores polypetal.) *Cal.* tubuloso-campanulatus 4-(6) dentatus coloratus persistens. *Pet.* 4 (6) minutissima. *Stam.* longissima ascendentia; *anth.* subrotundæ. *Caps.* globosa substipitata, calyce brevior 1-loc. polysperma receptaculo magno. *Frutex* ramis parallelis vimineis; folia disticha; flores in corymbis axillaribus confertis oppositis secundi, sursum flexi. Jussieu. gen. 331. (Char. ad *GRISLEAM* secundam solam confectus.) Interdum additur floris partibus.

G. tomentosa, foliis sessilibus subtus tomentosis corymbis (cymis) axillaribus patulis. Willd. sp. pl. 2. 321.

Grislea tomentosa. Roxb. corom. 1. 29. t. 31. Hort. Kew. ed. 2. 2. 347.

Woodfordia floribunda. Salisb. Parad. Lond. 42.

Lythrum fruticosum. Lin. sp. pl. 1. 641. Andrews's reposit. 467.

Frutex ramosus, erectus: rami villosi, bifariam foliosi. Folia opposita, cordato-lanceolata, interstitiis longiora, divaricata, obscure viridia, venosa, subtus tomentosa, subsessilia petiolo ferè obsoleto, 2-uncialia, $\frac{3}{4}$ partes unciae lata. Flores cymosi, miniato-coccinei: pedunculi 5-15-flori, in foliis supernis axillares, solitarii, folio breviores; pedicelli calyxque villosiusculi. *Cal.* clavato-tubulosus, semuncialis, subassurgens, ore fundi nectariferi extus annulato-protuberans, 6-multifidus, ad furcam cujusque divisuræ notatus tuberculo sphacelato nervum externè terminante et basi petali membranacei parvi lanceolati corollæ 6-multipetalæ opposito. *Stam.* 8-20, uncialia, æqualia, assurgentia, fundo nectarifero adnata: *anth.* 2-loculares, orbiculatæ, peltato-incumbentes. Germ. sessile, elongatè oblongum, teretiusculum; stylus erectus, filamentis 2-3-plo crassior; stig. simplex.

In point of ornament, this shrub seems to us in some sort to fill in the hothouse, the same place that the *FUCHSIA coccinea* does in the other departments of the garden.

Native of the hills and valleys of the northern provinces of the Carnatic, where it flowers during the cold and at the beginning of the hot season; with us from April to May. The calyx is of a bright scarlet colour, permanent, and serves as a covering to the seed-vessel, by which the beauty of the plant is considerably prolonged in India; but here the seed is seldom perfected, and the calyx decays sooner. Dr. Roxburgh tells us, that its appellation in the Telinga dialect is *Seringie*, and that he does not know any use that is made of any part of the shrub.

Its generic name commemorates the author of the *Viridarium lusitanicum*, Gabriel Grisley. Linnæus had arranged this species under *LYTHRUM*; from whence it has been removed to the present genus by the late Mr. Dryander, under whose inspection Dr. Roxburgh's work on the Coromandel plants was edited. It requires to be kept always in the stove. Varies much in the number of its stamens, segments of the calyx, and number of petals, from six to twenty, perhaps more.

Introduced in 1804 by Mr. William Salisbury.

The drawing was made at the nursery of Messrs. Whitley, Brame, and Milne, King's Road, Parson's Green.

a The calyx dissected, to show the insertion of the petals of the corolla between the segments of the calyx. *b* A stamen: magnified. *c* The pistil: magnified.



W. Edwards del.

Pub. by the U.S. Government June 1, 1895

Smith & Co.

LONICERA tatarica.

Tartarian Upright-Honeysuckle.

PENTANDRIA MONOGYNIA.

LONICERA. *Cal.* superus, 5-4-fidus basi bracteatus. *Cor.* monopetala, tubulosa, 5-fida; *limbus* subæqualis, regularis v. bilabiatus. *Stylus* 1: *stig.* capitatum v. crassum. *Bacca* sæpius polysperma.

Frutices volubiles aut erecti. Folia opposita, quorundam basi connata. Inflor. in pedunculis axillaribus & terminalibus multifloris biflorisve & solitariis; aut sessilis capitata terminalis aut verticillata axillaris. Genus à Jussæo suppressâ LONICERÆ appellatione in quatuor dispersitum, SYMPHORICARPON nempe, DIERVILLAM, XYLOSTEON, & CAPRIFOLIUM.

Div. Chamæcerasa, pedunculis bifloris.

L. tatarica, baccis distinctis, foliis cordatis obtusis. *Willd. sp. pl.* 1. 986.

Lonicera tatarica. *Lin. sp. pl.* 1. 247. *Gmel. sib.* 3. 134. n. 7. *Mill. dict. ed.* 8. n. 5. *Pall. ross.* 1. 55. t. 36. *Jacq. coll.* 1. 34. ic. rar. t. 37. *Schmidt. arb.* t. 111. *Hort. Kew.* 1. 332. ed. 2. 1. 379. *Georgi. beschr. des russ. reichs.* 4. 778.

Chamæcerasus fructu gemino rubro, foliis glabris cordatis. *Amm. ruth.* 184. n. 262.

(β) foliis minoribus, flore albo.

Lonicera pyrenaica: *Willd. arboret.* 181.

Frutex dumosus suborgyalis, stoloniferus, à basi ramosissimus; rami undequaque in orbem densati, glabri; ramuli novelli decussato-foliosi, floriferi. Folia decidua, breviter petiolata, oblongo-cordata v. ovata acumine brevi obtuso, glabra, nervosa; juniora sæpè ciliata. Pedunculi in foliis supernis axillares, solitarii. Involuc. bifolium, foliolis linearibus uno versu cum floribus suis divaricatis; bractæ geminæ ovatæ oppositæ involucri decussantes, germen singulum includentes. Germ. sessile, nitidum, coronatum calyce minimo 5-dentato. Flores 2 eidem pedicello insidentes, & in omni pari sibi mutuo à dorso obversati. Cor. semuncialis, incarnato-albicans, surrecta; tubus basi extrorsum gibbus; limbus longior, bilabiatus, laciniæ oblongæ, obtusæ, summæ 2 erectiores à latere interiore imbricato-conniventes, laterales divaricatæ, ima remotior. Fil. inclusa, tubi adnata et intra eum villosa: anth. viridi-lutescentes, erectæ, 4-sulcæ. Stylus filiformis, curvatus, villosus, stamina vix æquans. Stigma viride, pileiforme, sublobato-indentum, supra corrugato-convexum. Bacca subrotunda, subdepressa, rubra, nitida. Sem. pauca, compressa, flavescencia.

One of the most desirable shrubs we know of. It forms a close round extensive bush of five or six feet in height, feathering on all sides down to the ground, and is in full leaf and bloom in the middle of April, or sometimes earlier.

It is perfectly hardy, and will grow in almost any soil and situation. Notwithstanding these advantages it is certainly far from being common in gardens or shrubberies. The finest plants of it we have seen, are in Mr. Joseph Kirke's nursery, at Old Brompton, at which place the drawing was taken.

A native of the oriental provinces of Russia, where it is frequented by the spanish or blister-fly (*LYTTA vesicatoria*. *Gmel. syst. nat.* 1. 2013, the former *CANTHARIS* of the shops), which is collected by the apothecaries from this bush. The berries are eaten by the common people, although disgustingly bitter, and not entirely innoxious. The stem, which is sometimes two inches in diameter, is used in the manufacture of walking-sticks, and the handles of instruments; it is hard, solid, of a yellowish-grey colour, and beautifully veined.

Cultivated in 1752 by Mr. Miller, who raised it from seed, sent from Petersburg, where it had been received from Tartary. It varies in the shade with flowers entirely white.

In Jussieu's arrangement and nomenclature this species belongs to *XYLOSTEON*.

a The corolla dissected, to show the pubescence of the filaments within the tube. *b* The pistil between the two bractes, showing the germen crowned by the minute calyx without the corolla,



...L. H. Smith, del.

Pub. by J. Ridgway & Co. Beadilly.

July 1. 1873.

Smith, del.

ARCTOTIS aureola.

Plain orange-flowered Arctotis.

SYNGENESIA POLYGAMIA NECESSARIA.

ARCTOTIS. (Flores radiati.) Recept. setoso-alveolatum. Semina dorso semibiloculari v. bisulco. Pappus paleaceus. Cal. imbricatus: squamis apice scariosis. *Brown in Hort. Kew. ed. 2. 5. 169.*

Herbæ, v. haud rarò frutices. Folia integra v. multifida. Flores sæpiùs solitarii, radio revolutò-emarcescente.

A. aureola, fruticosa; appendiculis extimarum squamarum calycis reflexis, cuneato-oblongis acumine lato brevissimo, subarachnoideis.

Arctotis aspera. β . *Lin. sp. pl. 2. 1307. Willd. sp. pl. 3. 2356. Hort. Kew. 3. 273. ed. 2. 5. 173.*

A. aspera. γ . *undulata. Berg. cap. 317.*

A. undulata. Gart. sem. 2. 438.

A. foliis pinnato-sinuatis, lac. oblongis dentatis. Mill. dict. ed. 7. n. 3.

Arctotheca Jacobææ folio flore aurantio pulcherrimo. Vaill. act. paris. 1720. 330.

Anemonospermum afra; folio *Jacobææ* tenuitèr laciniato; flore aurantio pulcherrimo. *Boerh. lugdb. 1. 100. t. 100.*

Caulis lignosus, in plantâ senescente crassus, corlice suberoso rimoso tectus, ramosus: rami albicantes, striis purpureis. Folia numerosa, remotiùs sparsa, v. fasciculato-approximata, modò auriculato-amplexicaulia, surrecto-patentia, lyrato-sinuata, v. profundè pinnatifida et modò interruptè, suprâ villosa et subarachnoideo-velata, asperiuscula, subtilius tomentoso-candicantia & varicoso-nervosa, subsemipedalia, subsesquiunciam lata; lobis undulatè erosò-dentatis apice rotundatis; denticulis mucronatis. Pedunculi solitarii v. gemini, terminales & axillares, subaphylli, elongati, 1-flori, striati, villis atropurpureis pubi albide interspersis nigricantes. Cal. hemisphæroideus, virens, subglaber, ordine quintuplâ inæquali imbricatus; squamæ extimæ, minores appendiculis nec subulatis nec hirsutis, mediæ subovatae margine nigro-scariosâ, intimæ laminâ latâ hyalino-scariosâ apice purpurascente. Radius aurantiacus, extus tinctus rubore, transversè 4-uncialis, fertilis, fœmineus, numerosus, simplex: ligulæ elongato-oblongæ, lineas circitèr 3 latæ, subbiplicatæ; tubo brevì glabro: stigmata laminæ 2 ovales, exsertæ: germina parva, turbinata, sericeo-villosa, coronata paleis pluribus latis apice denticulato-rotundis ipsis bis-ter longioribus aliâque serie externâ acutâ 3-plo minore cinctis. Discus calyci æqualis purpureo-nigricans; flosc. glabri, profundè 5-fidi, apice reflexi & fulvo-fuscescentes, centraliores steriles: anth. inclusæ; pollen aurantiacum: stylus lutescens, elasticus; in sterilibus sub fructificatione ferè pro altero tanto se extendens, rursusque contrahens; hic stigma clava elongato-cylindrica, mox omni polline à cingente anthera accepto ipsi inutili onusta suprâ discum elevanda, indè excusso in circumdantes flosculos fœmineos onere intra suum flosculum iterùm recondenda. Hæc dum nuper emersa mirè sensibilis; eò versus vivo motu se inclinans ab undè tactû vel levissimo fuerit excitata. In periphæriâ disci flosculi plures hermaphroditi fertiles, stigmatè fermè radii.

To us the present plant appears a distinct species from *aspera*, of which however it has been always recorded as the variety β . Without laying any stress on the larger and differently coloured flower, it may be distinguished by a foliage by no means various to the extent it is in that, where the central upper stem-leaves have commonly a broad disk with a shallowly indented margin, and are transformed in the same plant by intermediate changes into deeply pinnatifid ones with a very narrow disk, in which the villous pubescence intermixed with the araneous one that covers the upper surface, is far more abundant, longer, and harsher than in the present plant; but the more palpable mark is in the outermost scales or leaflets of the calyx, which in *aureola* are reflex, obversely or cuneately oblong, flat, with a broad shortly pointed termination, and a slight araneous pubescence beneath; but in *aspera*, revolute, subulate or acicular, with a remarkably close shaggy pubescence.

This plant, although it has been long and very generally known in our gardens, probably ever since the time of Miller, has never been represented by any figure that we can trace, except the diminished engraving we have quoted from Boörhaave's Index to the Leyden Garden. It becomes shrubby as well as *aspera*, acquiring by age a hard-wooded close-fibred stem of nearly an inch and half in diameter. Notwithstanding this, to have either of the species in perfection, they should be frequently renewed by cuttings, which strike easily if planted in a border of light earth during any of the summer months. These, when properly rooted, may be potted in the autumn, in order to be sheltered for the winter in the greenhouse or garden-frame. In summer they can scarcely be supplied with too much water, if properly drained. Old plants are apt to become mouldy, and should be frequently cleared of their decayed leaves. Both species are very desirable acquisitions for the greenhouse, since, besides the beauty of the bloom, easy culture and propagation, they afford a succession of flowers nearly the year round.

Native of the Cape of Good Hope.

The drawing was made at the nursery of Messrs. Colville, in the King's Road, Chelsea.

a A vertical section of the calyx and receptacle. *b* A floret of the ray, with the germen and double pappus. *c* A floret of the disk, showing a barren stigma covered with pollen, as protruded from within the tube of the anther to above its floret, in order for dispersing the pollen among the fertile stigmas; after which it reverts to its former position within the anther.



Lyt. Edwards del

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1811

PACHYSANDRA procumbens.

Trailing Pachysandra.

MONÆCIA TETRANDRIA.

PACHYSANDRA. Masculi. Cal. 4-phyllus. Cor. 0. Fœminei. Cal. 4-phyllus. Cor. 0. Styli 3. Caps. 3-cornis 3-loc. Sem. 2. Willd. sp. pl. 4. 339.

P. procumbens. Michaux. bor. amer. 2. 178. Willd. ubi suprâ. Pursh. amer. sept. 1. 117. Hort. Kew. ed. 2. 5. 260.

Herba perennis, sempervirens?, rhizomate horizontali undique à stolonibus prorepente. Caulis simplex, decumbenti-assurgens, infra pedem longus, tenax, teres, rubro-fuscescens, vix æquans crassitudinem pennæ scriptoriæ, flexuosus, sulcatus, tomentosus, supernè subcomoso-foliosus, infernè spiciger nudus v. squamis nonnullis vagis stipatus. Folia petiolata, plurima, sparsa, approximata, erectiuscula, ovalia, sæpè apicem versùs utrinque grossius paucidentata, in nervis villosa: petioli subunciales. Spicæ androgynæ in pedunculo 1-3-unciali cauli subsimili squamâ bracteaceâ ad basin appressâ, vagæ, nudæ, erectæ, summæ modò in imis foliis axillares, supernè multifloro-masculæ, infernè bifloro-fœmineæ; laxius sparsæ. Flores subsemunciales, sessiles, erecti, virides, lineis interruptis densissimis sanguineis cinnamomeo-rubentes: MASCULUS bracteâ ipsi subsimili exceptus: cal. turbinato-campanulatus; foliola ovato-acuminata, ciliolata, lateralìa bina opposita exteriora, reliqua duo includentia: fil. crassa hujus axi carnosæ inserta, subtriplo longiora, subclavato-teretia, compressa, rugosula, erecto-divergentia, alba: anth. parvulæ cinnamomeæ, erectæ, ovato-oblongæ, basi sagittatæ, biloculares, summo filamento breviter à dorso introrsum adnatæ, loculis intùs profundè distinctis, extùs rachi prominente connexis. Fœmineus masculo profectò similis, sed aliquantulum minor, & bracteis pluribus (3?) squamiformibus (unâ exteriore) imbricatus: pist. floris concolor; germ. tricocco-subrotundum, cocculis singulis dispermis in stylos sibi æquicrassos semiteretes breves intùs sulcatos continuatis; stigmata 3, exserta, replicata, pro flore magna, lingulata, acuta, extùs convexa, rugosula, intùs plana, explicata, glabra striâ mediâ prominulâ, margine ciliolata. (Caps. 3-cocca, 3-cornis, 3-loc.: sem. in singulis loculis bina, oblonga, summo loculo appensa, lævigata).

Native of rocky parts in the Alleghany mountains, where it grows in shady situations. First found by Michaux. An herbaceous perennial evergreen plant of humble growth; seldom, we believe, exceeding the dimensions of the subject of the present figure, but spreading itself in every direction by suckers from a somewhat creeping rootstock. Of little value in the flower-garden but as a botanical curiosity. At present the only known species of the genus; which has been, we understand, decided to belong to Jussieu's natural order of Euphorbiæ. The contrast of the tall

massive white filaments of the upper flowers with the proportionately small cinnamon-coloured calyx and anthers, forms the conspicuous feature of the bloom, which is slightly fragrant. A perfectly hardy plant, and will grow in any shady situation; flowering in March and April. Introduced by Messrs. Frasers in 1800.

The drawing was taken at Mr. Joseph Kirke's nursery, Old Brompton.

a The 4 stamens of the male flower separated from the calyx. *b* The pistil of the female flower separated from the calyx.



Colobanthus A. L.

Abb. J. Putgway 170 Scandell July 1. 1875.

Smith del.

ARCTOTIS aspera.
Rough-leaved Arctotis.

SYNGENESIA POLYGAMIA NECESSARIA.

ARCTOTIS. *Suprà fol. 32.*

A. aspera, fruticosa; foliis indentatis v. profundè pinnatifidis, suprà subarachnoideis, asperiùs hirsutiùsque villosis; appendiculis squamarum extimarum calycis revolutis, subulatis, hirsutis.

Arctotis aspera (α). *Lin. sp. pl.* 2. 1307. *Hort. Kew.* 3. 273. *ed.* 2. 5. 173. *Willd. sp. pl.* 3. 2356.

A. arborescens. *Jacq. hort. schoenb.* 2. 23. *t.* 171; (*exhibens frustrum caulis plantæ senescentis cum ramo inferiore florifero, foliis macrescentibus profundè pinnatifidis.*) *Willd. sp. pl.* 3. 2357.

A. foliis pinnato-laciniatis crispis caule ramoso fruticoso. *Mill. dict. ed.* 7. *n.* 8.

Anemonospermos africana, fol. cardui benedicti, florum radiis intùs albis. *Comm. hort.* 2. 45. *t.* 23.

Planta tota ex villis densis asperiusculis pubi subarachnoideæ interspersis hirsuta. Folia lyrato-spathulata, v. indentata, v. sinuata, v. profundè pinnatifida, suprà viridi-cana, subtùs candicantia. Pedunculi subscapiformes, hirsuti, sulcati, modò foliolis subbinis vagis remotè stipati. Pollen luteum. Stylus chloroleucus. Cætera omnia, præter colorem & quæ suprà in caractere specifico distinximus, ferè ARCTOTIDIS aureolæ fol. super. 32. Flos tamen minor calyxque angustior.

It is not always an easy task to recognise the species of this family, owing to the variation in their foliage, especially when viewed under the different aspects imparted by age or luxuriance of growth; a circumstance that may have been the cause why the present has not been known by Jacquin as the *aspera* of Linnæus, but been published by that botanist under a new name. The figure he has given is of a specimen of a fragment of the stem, to which only a lower branch is attached; in this the leaves are all deeply pinnatifid with a narrow disk, as is usual, as far as we have seen, in all branches of old plants of this species.

We have been amused by observing the newly expanded flowers of this and *aureola*, on a bright warm day, under the shelter of a greenhouse; when the stigmas of the barren florets may be perceived to emerge from within the tube of the concealed anthers, carrying up the pollen parted with to them by those organs, and which is seen to adhere

in a thick coat of yellow powder, to afford it from this new position the means of an access necessary to the otherwise unprovided stigmas of the surrounding ray: a task to which the proper organ is evidently here incompetent. By and by the same are seen to retreat gradually within the cavity of the now empty anthers. When recently emerged and charged with pollen, they bend and incline themselves with a lively motion on the slightest touch, but always in the direction whence the impulse came; and in so doing necessarily part with a portion of the pollen that covers them. And as the honeyed liquid which attracts the insect to the flower is deposited in the ray that surrounds the disk, the impulse will be the more certainly given by that mean, probably the only one, from the side towards which it is requisite that the pollen should be carried. The style, by the extension and contraction of which the stigma is made to advance and withdraw, seems to consist of a substance resembling *elastic gum* (Caoutchouc), and may be repeatedly drawn out to a considerable extent like that, contracting to its former dimensions when left to itself with the same elastic force.

The outer series of the chaffy seed-crown, shown in the dissection, seems not to have been elsewhere noticed; at least not in any work known to us.

The flower of both this and *aureola* have a slightly bitter smell.

Native of the Cape of Good Hope. Cultivated here before 1710.

The drawing was made at Mr. Rolls's nursery, the King's Road, Chelsea.

a A vertical section, showing the bristly alveolated receptacle, deprived of its florets. *b* A fertile floret of the ray, with the germen crowned by a double paleaceous pappus, enveloping the tube of the floret, above which the stigmas are elevated. *c* A barren floret of the disk, in which the stigma is shown in the elevation it acquires to aid in the distribution of the pollen among the florets of the ray: magnif.

GAZANIA pavonia.

Hazel-ringed Gazania.

SYNGENESIA POLYGAMIA FRUSTRANEA.

GAZANIA. (Flores radiati.) *Recept.* epaleatum (nudum; v. alveolatum germinibus exsertis). *Semina* villosissima. *Pappus* pilosopaleaceus. *Cal.* monophyllus: tubo foliolis imbricatis tecto v. nudo. *Brown in Hort. Kew. ed. 2. 5. 140.*

Herbæ perennes; rhizoma breviter caudescens, procumbens. Folia integra v. pinnatifida. Flores solitarii: duplici nisu se claudentes; ubi enim connivet radius, ibi ligula singula sese arcte involvit à lateribus suis seorsim, iterum divergente radio sese explicatura.

G. pavonia, foliis pinnatifidis supra pilosis subtus tomentosis: laciniis ovali-lanceolatis, scapo unifloro, caule decumbente. *Brown, ubi supra.*

Gorteria pavonia. *Andrews's reposit. 523.*

Rhizoma divisum, fuscum, sæpius pluriceps. Folia plurima, rigida, fasciculato-approximata, petiolato-lyrata, pinnatifida, supra & in nervis undique hispida, subtus candicantia, lobis mucronato-acutis integerrimis, sensim infernè versùs decreascentibus in meros mucrones; petiolus basi dilatatus convoluto-amplexicaulis. Pedunculus scaposus, uniflorus, è centro foliorum quibus altior, sæpius foliolo uno aut altero lineari vagè stipatus, subpubescens. *Cal.* nudus, cupulatus, viridis, nigro marmoratus, subarachnoideus, setulis albis tuberculo nigro insitis scabratus, supra imbricato-multifidus lacinulis erectis, ovatis, exciso-attenuatis, obtusis, muticis, glabris, latè virentibus periphæriâ nigrâ. Radius numerosus, simplex, uncias 4 magisve transversus, aureus circulo ad basin intus ferrugineo & figuris albis fulvisque notato, extus carulescente: flosc. neutri tubo complanato solido; ligulâ spathulato-lanceolatâ, apice levissimè indentatâ, dorso carinato-biplicatâ. Discus numerosus, ustulato-fulvescens, altitudine calycis, hermaphroditus, fertilis: flosc. cum barbâ longâ sericâ ascendente germinum intermixti, tereti-tubulosi, 5-lineati, glabri, 5-fidi lacinulis subulatis infernè conniventibus supernè stellatis. Anth. lutea, inclusa, acutè 5-dentata. Stylus ubi cingitur antherâ violaceus, infra albidus: stig. parùm crassius, clavato-elongatum, lutescens, totum exsertum, supernè in duo replicata secedens, basi annulato-protuberans: germ. elongato-obconicum, alveolo suo triplo altius, tectum pilis densis tenuissimis & mollissimis, flosculo parùm brevioribus: pappus hic triplo brevior, paleaceo-pilosus, multiplex in serie singulari. *Recept. convexum breviter alveolato-pilosum.*

The genus was founded under its present name by Gærtner, by detaching from *GORTERIA* its well-known *rigens*; and has been since judiciously adopted by Mr. Brown, in the late edition of the *Hortus Kewensis*, where two other species have been added, of which the present is one. In *GORTERIA* the pappus, or seed-crown, is a mere ciliate edge,

and the calyx closes and finally hardens round the seed, which it retains and falls off with; circumstances that do not belong to *GAZANIA*.

The subject of the present article is from the Cape of Good Hope, where it was collected by Mr. Niven, for Mr. Hibbert's late botanic establishment at Clapham, about the year 1804. The specific name seems to have been suggested by some resemblance in the colour of the ray to that of the corolla of the *TIGRIDIA pavonia*. The coriaceously thickened calyx is formed of a concretion of numerous unequal leaflets, the inner ones of which remain separated near the top, into about 4 imbricate series. The dark irregular marks and small one-bristled knobs or tubercles, that are seen on its outside, denote the terminations of the several leaflets that are merged in its substance. When the flower closes in the evening, or from the absence of sunshine, besides the general movement by which the ray converges, each of its broad semiflorets rolls itself up very compactly from each side, inwards, to the middle; to expand again in the morning, or when the sun appears. In *GAZANIA rigens* the circle that encompasses the foot of the ray is black, here of an hazel-brown on the inside, and blue on the opposite surface. At Messrs. Colville's and Mr. Knight's nurseries, we have seen a plant which we take to be an hybrid, or cross production of the two, partaking in almost equal proportions of those parts in which the parents differ, but altogether smoother and more robust than either; the very circle of the ray is partly black, as in *rigens*; partly brown, as in *pavonia*.

The present drawing was made in part at the Comtesse de Vandes' botanic-garden, and in part at Messrs. Fraser's, in Sloane Square.

The species is certainly perennial, although marked in the Hortus Kewensis as biennial. Should be kept in the greenhouse, where it requires no care beyond an occasional supply of water. Easily multiplied by dividing the root-stock.

a The calyx deprived of all the florets. *b* A vertical section of the receptacle, with the lower portion of the calyx. *c* A floret of the ray; frontwise. *d* The back of the same. *e* A floret of the disk; with its germen and seed-crown, or pappus, enveloped in the pubescence that grows from the former.



J. Edmonstone del.

Bot. by J. H. Kew 170 Piccadilly July 1. 1815

Smith sc.

ECHIUM fruticosum.

Shrubby Cape-Viper's Bugloss.

PENTANDRIA MONOGYNIA.

ECHIUM. (Fructus gymno-tetraspermus. Faux corollæ nuda.)
Cal. 5-partitus. *Cor.* tubo brevi, limbo ampliore, campanulato, obli-
 liquè 5-lobo inæquali. *Stigma* 2-fidum. *Flores* spicati aut spicato-
 paniculati, in spiculis secundi. *Species* quædam suffrutescentes. Jussieu.
 gen. 130.

E. fruticosum, undique pubescens; floribus in summis ramis laxè sub-
 corymboso-paniculatis; tubo fimbriâ villosâ 5-lobâ clauso: staminibus
 inclusis, inæqualissimis.

Echium fruticosum. *Lin. sp. pl.* 1. 199. *Berg. cap.* 39. *Thunb.*
prod. 33. *Hort. Kew.* 1. 186. *Willd. sp. pl.* 1. 782. *Hort. Kew.*
ed. 2. 1. 298; (excluso Jacquino.)

E. caule fruticoso, ramis foliisque pilosis. *Mill. dict. ed.* 7. n. 7.

E. africanum fruticans foliis pilosis. *Comm. hort.* 2. 107. t. 54.

Frutex 3-pedalis, ramosus, cortice fusco; rami albo-villosi, patentes. Folia
 numerosa, non conferta, sparsa, patentissima, coriaceo-crassa, elongato-
 oblonga acumine brevi, deorsum subattenuata, sessilia, ex punctis elevatis
 piliferis villosa-strigosa, cana, avenia costâ mediâ subtus prominulâ, 1-2-un-
 cialia, 2-4 lineas lata. Paniculæ laxæ ramorum terminales tandem corymboso-
 fastigiantes, singulæ ex spiculis pluribus pedunculatis axillaribus patentibus
 sæpè conjugatis, evolventibus sese floribus sensim arrigendæ. Bractæa dimi-
 nuto-foliaceæ, persistentes. Flores suaveolentes, fermè unciales, antè expli-
 cationem roseo-rubentes, indè cærulescentes. *Cal.* herbaceus, vix semuncialis,
 subbilabiatus, hirsutus; segmenta lineari-subulata, 2 summa proximiora,
 imum subminus. *Cor.* extus pubescens, turbinato-campanulata, bilabiato-
 obliquata, nervis 5 albis equidistantibus striata; lacinia breves, subsemiovato-
 rotundatæ, summæ 2 proximiores, porrectiores. *Stam.* ori villosi tubi angusti
 brevissimi imposita, declinato-assurgentia, divergentia, unum plurimum bre-
 vius. *Stylus* filamentis duplo gracilior, fusino-filiformis, pro maximâ suâ parte
 villosus, utrinque breviter attenuatus & glaber: stig. obtusum, levissimè 2-
 fidum.

We do not doubt that the present plant is the *ECHIUM fruticosum* of the Hortus Kewensis; but certainly have some doubt whether that of Jacquin, admitted for a synonym in the late edition of that work, is of the same species. There the inflorescence terminates each branch in a simple continuous scattered axillary upright spike of smaller flowers, and the leaves are of a more ovate form and shorter. Spontaneous specimens of each have been evidently grouped together, as of one species, in the Banksian Herbarium.

But still we think their diversity is of that sort that cannot be presumed an effect of either age or seminal inconstancy. And we have no reason to think it has been proved by experiment, or even deduced from any analogous variation in other species of the tribe. Our plant is undoubtedly that of Bergius, whose description is complete; of Commelin, of Thunberg, and of Miller as a specimen from the Chelsea garden proves. We have no reason to suspect its not being likewise that of Linnæus, who quotes Commelin's figure; but we have not seen his specimen, and what he has said of it will not serve to decide so near a distinction. It comes very close to *glabrum*, but that is destitute of pubescence, and is glaucous. The colour of the corolla varies from nearly all blue to nearly all pearl-colour, and the plant has a very different appearance when the several spikelets are completely evolved, from that which it has when these are only partially so. While the leaves are young and fresh, the appressed pubescence can scarcely be said to be hard, but when these are full grown or dry, this is as rigid nearly as if of metal; each hair stands upon a small tubercle or elevated callous point, which is sometimes white, like chalk. The bloom smells like honey. Bergius notices the pubescence in the orifice of the tube, but as an appendage to the bases of the stamens. Cultivated in 1759 by Miller. Native of the Cape of Good Hope. A greenhouse plant; thriving in peat-earth with a mixture of hazel-loam; and if placed in a pan of water just before the bloom expands, this will be larger and more purple than otherwise. Blooms in May and June. Multiplied by cuttings.

The drawing was made from a plant in Mr. Creswell's conservatory at Earl's Court, Brompton. We saw one at Mr. Colville's nursery, in the King's Road, with larger flowers, some of which were of a peach-colour, and nearly transparent; the young branches were also very red. And another at Mr. Knight's exotic nursery, in which the flowers were smaller and bluer even than in the present, and the young branches entirely green, without any mixture of red whatever.

a The calyx. *b* The tube of the flower deprived of its limb, and cut open to show the insertion of the stamens and the villous orifice. *c* The pistil.



Spel Edwards. del.

Pub. by J. R. Wherry 170 Piccadilly July 1. 1815

Smith. Sc.

RHODODENDRON punctatum. β .*Plain-flowered dotted-leaved Rhododendron.*

DECANDRIA MONOGYNIA.

RHODODENDRON. *Cal.* 5-partitus. *Cor.* monopetala, infundibuliformis, limbo patente, 5-lobo. *Stam.* corollæ inserta, declinata. *Germ.* superum; *stig.* simplex. *Caps.* 5-loc., valvis utroque margine introflexo singulis loculum constituentibus polyspermum, & axi centrali annexis: *sem.* minuta.

Frutices. Flores axillares aut terminales, spicati aut subcorymbosi, pedicellis longis unifloris basi bracteolatis. Gemmæ in plurimis terminales imbricatæ. Jussieu. gen. 158.

R. punctatum, foliis ovali-lanceolatis utrinque acutis glabris subtus ferrugineis resinoso-punctatis, umbellis terminalibus, pedicellis brevibus, dentibus calycis brevissimis, corollis infundibuliformibus, laciniis ovatis subundulatis, capsulis elongatis. *Pursh amer. sept.* 1. 298.

Rhododendron punctatum. *Willd. sp. pl.* 2. 607. *Hort. Kew. ed.* 2. 2. 51.

R. minus. *Michaux. bor-amer.* 1. 258. *Persoon. syn.* 1. 478.

(α) corolla minore suprâ in fauce viridi maculata.

R. punctatum. *Andrews's reposit.* 36. *Venten. cels.* 15.

(β) corolla majore, maculis viridibus experte. *Suprà.*

Frutex proliferus 2-4-pedalis, badio-corticatus; folia subtus & rami undique resinâ sudatâ primò albido-crystallizante indè ferrugineo-exsiccante densè punctata. Folia subtriuncialia coriacea, suprâ lurido-viridia immersè reticulato-venosissima, glabra. Umbella pluri-(6-8) flora, pedicellis corollâ duplo brevioribus, bracteis extimis sphacelatis, intimis viridibus. *Cor.* roseo-pallescent, limbo subbilabiato-rotato, laciniis rotundatis, æqualibus, 3 supremis subantrorsum conniventibus, 2 infimis subretrorsum divaricatis. Fil. infra medium crassiora barbataque: anth. introrsæ, secundum sulcum dorsalem affixæ, poro gemino dehiscentes. Stylus filamentis duplo crassior & brevior, deflectendus: stig. obliquè & transversè semicapitato-obtusum, anticè papulosum.

This handsome variety of the dotted-leaved Rhododendron has been very lately raised from seed imported from America by Messrs. Fraser, nurserymen, in Sloane Square, by whom the other variety was introduced in 1786. It differs from that, in being a plant of a more compact growth, with a broader foliage, a corolla an inch or more in depth, and of an uniform pale pink colour, entirely free from the green spots that are so conspicuous in the upper part of the faux of the other; where the corolla is little more than half

the depth of the present. The species is native of the mountains of Carolina. Like most other North American plants, it grows with us in the open air ; but the buds which contain the flowers are apt to be so far affected by our late frosts, as to prevent a perfect expansion of the bloom, unless the plant has been removed into a greenhouse conservatory or some kind of shelter very early in the spring. Should be planted in bog-earth, where it attains the height of three feet, and sometimes even four. The present variety promises, independent of the superior beauty of the flower, to be a more valuable acquisition than the old one ; as it has not the defect of becoming straggling and bare, which that has. Propagated by layers, as well as seed.

a The pistil, showing the manner in which the small five-cleft calyx converges round the germen when the corolla has been removed. *b* A stamen. *c* The outline of a detached flower from the old variety, to show the difference of size between the two, and the manner of the spotting of the corolla in that.



J. Edwards del.

Lib. by J. Ridgway 1770



Beaudet July 1. 1895

Smith. Jr

AMARYLLIS *crocata*.
Reflex-flowered Amaryllis.

HEXANDRIA MONOGYNIA.

AMARYLLIS. *Suprà fol. 23.*

A. *crocata*, spatha bivalvi, pluriflora, pedicellis subæquali; corolla inæquali, nutante, divaricato-ringente, tubo germen vix æquante; lacinia summa remota, partim reflexa, lateralibus cunctis in imam deflexam & duplo angustiozem obliquantibus: fauce tubi nudâ.

Bulbus tectus membranis pallido-fuscis. Folia plura, bifaria, recurva, lorato-lanceolata fine obtuso-attenuato, striata interstitiis per lineolas transversas interruptas cancellatis, subsesquipedalia duasque uncias ad summum lata, nec glauca. Scapus glaucissimus, bipedalis, columnaris crassitudine digiti majoris, teres, basi purpurascens. Spatha (in præsentì specimine) 4-flora, lanceolata, citò exarescens, reflexa, striata. Pedunculi erecti, biunciales, obtusè triquetri. Germ. viride, oblongum, obtusè trigonum, tubo crassius et ferè longius; loculi ovulis fæti numerosis compresso-cumulatis. Cor. miniato-crocata, venis simplicibus parallelis striata, subquadruncialis; infernè breviter in tubum virentem imbricato-connata; faux brevis, ampliùs turbinata, intus stellata radiis senis subrhomboideo-lanceolatis flavo-virentibus; limbus radiato-recurvus; lacinie ovali-lanceolatæ, subundulatæ exteriores trinæ latiores, hamato-mucronatæ, suprema in labium summum procul segregata, laterales duæ superiores horizontalitè divergentes, oppositæ, muticæ, lateræ utroque replicato-undulatæ, infima omnium angustior, elongato-oblonga, apice rotundata. Stam. declinato-assurgentia, alternè longiora, corollâ $\frac{1}{4}$ circiter breviora: fil. & stylus rubent. Stigmata profundius discreta, lineari-teretia, obtusa, alba.

The same collection which two months ago enabled us to add the *AMARYLLIS rutila* to the list of this splendid genus, has in the present supplied another unrecorded species, superior in beauty to the former. It is said to have been found in the Brazils by Mr. E. Woodford; and received by the way of Lisbon by Mr. Griffin, with whom it flowered in the dry-stove of his garden at South Lambeth in May last, for the first time.

Independent of other peculiarities, it is at once distinguished by the remarkably insulated upper middle segment of its corolla, farther removed from its two immediate lateral ones than in any species we can recollect, and forms alone the upper lip of the flower; while the under-lip may be said to consist of the remainder, four of which converge towards the lower middle one, which does not project as in

rutila and *equestris*. The flower has no scent, is of a bright glittering salmon-colour, about four inches deep, and almost six across the widest dimension of the aperture, nearly transparent and streaked with longitudinal parallel veins, not visibly barred in the intervals, as in the leaves. The mouth of the tube is entirely smooth. *Stem* two feet or more high, clouded with a blueish or grey bloom; *leaves* considerably shorter, of a clear unclouded green, and irregularly latticed-veined, the intervals between their straight longitudinal parallel veins being crossed or barred by broken lines at equal but irregularly disposed distances; in the way that both flower and leaves are in *AMARYLLIS reticulata*.

It has been suggested to us, that the double-flowered variety of the plant, introduced a few years since by Messrs. Fraser, of Sloane Square, and known among the gardeners by the name of *AMARYLLIS pulcherrima*, may belong to this species, the colour being nearly the same; but we take that to be *AMARYLLIS equestris*, or a species nearer to that than to the present, if really distinct. The corolla is there, however, too much deformed by the multiplicity of petals to afford decisive evidence of such close distinction; especially as the tube is filled up, and it cannot be discerned with which the interior of that agrees.

a Three of the stamens as they are placed on the tube, which is cut open and separated from the rest of the corolla. *b* The pistil. *c* An unripe capsule. *d* A diminished figure of the whole plant, after the flower has faded, and the fruit is set.



Ipom. alba Walp.

Publ. by J. Ridgway 170 Piccadilly Aug 6. 1815

Smith. Sc.

IPOMŒA mutabilis.
Blue shrubby Ipomœa.

PENTANDRIA MONOGYNIA.

IPOMŒA. Suprà fol. 9.

Div. Caulis volubilis.

I. mutabilis, fruticosa, pubescens; foliis cordatis integris trilobisve, acuminatis, suprà appressè villosis, scabriusculis, infrà tomentosis; floribus in summo pedunculo plurimis cymoso-aggregatis (*cymulis sæpiùs segregatis*); calyce arcto, villoso, subæquali, suprà laxo.

Frutex sempervirens, altissimè scandens, radice & superiùs in caule samententa promens innumera purpurea asperiùs villosa; caulis crassitudine digiti, lignosus, flexilis, tenax, cinereo-corticatus: rami teretes, volubiles alternè remotèque foliosi, novelli subtomentosi. Folia petiolata sinù baseos obtusissimo v. subtruncato, ad summum quadriuncialia, vix longiora quàm lata, suprà viridia, subtùs tomentoso-albicantia venisque varicosis adscendentibus cum aliis transversis cancellata: petiolus parùm brevior filiformis, suprà obsoletè canaliculatus. Pedunculi stricti, teretes, asperiùs villosi, ramiformes, petiolo plurimùm longiores, axillares, solitarii, multiflori, suprà composito-cymosi; cymæ 1-3, congesto-trichotomæ, breves, terminales & laterales, proximæ, breviter stipitatæ vel sessiles, folio diminuto ad basin posito segregatæ, villosæ; pedicelli calyce breviores, laterales singularum trichotomiarum plures, basi bibracteati, medius nudus; bracteæ subulatæ. Cal. uncialis; foliola angusta, lineari-lanceolata acumine longo subulato laxo, conformia, intima 2 parùm minora. Cor. magna, triplo magisve longior; tubus albus in faucem cylindricam pro altero tanto ampliatus; limbus rotato-campanulatus, manè vividissimè cyaneus, indè è plicis rubere incipiens, totus vesperè roseo-emarcescens, laciniae rotundatæ, medio fissæ, dentibus 5 interstinctæ. Stam. erecta, tubo faucis inclusa, albida, basi barbata, 2 breviora satis. Stigma granulato-globosum, album.

We have to add another species to this encumbered genus; at least we are unable to reduce the present to any recorded plant that we can trace. It approaches near to *IPOMŒA congesta* of Mr. Brown (*prodr.* 485), which we take to be *CONVOLVULUS multiflorus* of the Banksian Herbarium from New Holland; but there the leaves are all entire, smaller, and covered on the upper surface with a short dense pile like that of velvet; not as here, somewhat roughened by a thin appressed pubescence; nor is that a shrubby species, none of which indeed came within the observation of Mr. Brown in the parts of New Holland he visited.

A plant of rapid and extensive growth, having in the

present instance attained the length of near 60 feet within the space of three years from seed; and had not the swarm of runners it produces from both root and stem been repeatedly stopped and removed, would probably have extended itself on all sides to the same distance, and overrun the stove in which it grows. We can hardly conceive any single vegetable to form a more pleasing and durable ornament than this; which should be led round the hothouse along a lath or iron-rod, when the twining branches, clothed by a broad heart-shaped foliage, will constitute a thick evergreen wreath, from various parts of which, throughout its whole extent, a succession of large azure bloom is kept up for months together; so that the entire circumference of the house will be daily enlivened by fresh appearances of it. Individually the flowers are but of short duration; in the morning, of a vivid ultramarine blue; by mid-day, reddening at the plaits of the border; before sunset, wholly suffused with red, when they dissolve. The stem is of a tough pliable wood, in external appearance much like that of the *ARISTOLOCHIA Siph.* The foliage varies from cordate and undivided, to two three-lobed with broad lanceolate divisions.

A stove plant, and should be placed in a border of rich loam formed within the tan-pit, and boarded off from the tan down to the bottom. No plant can be easier to multiply; the runners protruding their roots, even while suspended in the air, from beneath the leaf at every joint.

Native of South America. Raised from seed brought from Vera Cruz about three years ago to Alexander Johnston, gardener to Mrs. Hatch, Clayberry Hall, Essex; but whether gathered in the neighbourhood of the town, or in the interior of the country, cannot at present be ascertained.

The drawing was made at the botanical establishment of the Comtesse de Vandes, Bayswater.

a The stamens as they stand within the cylindric faux. *b* The pistil.





Spl. Edwards del.

Pub. by J. B. Edwards, 1881.

Smith &

CALENDULA chrysanthemifolia.

Large-flowered shrubby Cape-marygold.

SYNGENESIA POLYGAMIA NECESSARIA.

CALENDULA. Suprà fol. 28.

C. chrysanthemifolia, foliis cuneato-obovatis lyrato-incisis scabriusculis, caule fruticoso erecto. *Hort. Kew. ed. 2. 5. 169.*

Calendula chrysanthemifolia. *Venten. malmâis. 56. Persoon. syn. 2. 492.*

Suffrutex qualis CALENDULA Tragus β folii superioris 28. Pedunculi solitarii, teretes, uniflori, nudiusculi, ramorum herbaceorum erectorum continui, uti rami calyx atque folia hispidius villosi. Folia sesqui-biuncialia, sparsa, horizontalia, distantia, cuneato-v. obovato-oblonga, incisa segmentis sinibusque angulatis acutis modòque subdentatis, in petiolum decursivo-attenuata. Flos totus flavus, maximus generis: flosc. radii fœminei, totidem ac foliola calycis, sesquiunciales longioresve latitudine vix bilineari, lanceolato-lineares, in tubo brevi & paullim supra eum pilosi, 5-nerves, obsolete plicati, apice sæpius angustè tridentati, subtùs partim rubore tincti: stylus flavus exsertus; stig. 2, linearia, acuta, recurvata, flava: germ. obpyramidatum, glabrum, 3-quetrum, angulis membranoso-extenuatis: disci hermaphroditi, steriles calyci æquales, extùs villosi, cylindrici, basi in tubulum brevem glabrum constricti; limbus erectus, acuminatus: anth. partim exsertæ, apice 5 dentatæ: stig. 2, lineari-oblonga, obtusa, patula, satis supra antheram elevata: germ. obcordato-oblongum, complanatum, subinæquilaterum lateribus membranaceis quorum externo gibbosiore, apice obliquè depressum, margine brevi membranaceâ externè versus productiore et quasi subauriculatâ.

Just such another undershrub as the *CALENDULA Tragus* of this work (see fol. 28); attains the same height, requires, like that, to be supported while in bloom, and is propagated in the same way, but is generally more numerously branched. In the foliage and flower there is considerable difference; the latter is the largest yet known of the genus. The whole of the herbaceous part of the plant is covered with a short harsh pubescence. It blooms freely most part of the summer, is very ornamental, and the flower lasts long unfaded; nor does it require so bright a day to expand as in *Tragus*, nor close so capriciously from change of weather as in that. Monsieur Ventenat, by whom it was first made known, considers the species as partaking of both *OSTEOSPERMUM* and *CALENDULA*; agreeing with the former in a fertile female ray and barren hermaphrodite disk, with the latter in the seed.

Native of the Cape of Good Hope, from whence it was introduced by Mr. Masson in 1790. Till lately usually known among our gardeners by the name of *OTHONNA grandiflora*. When the flower has been expanded for some time the ray becomes revolute in the circumference, and the disk appearing higher and more convex than usual in the genus, owing to a greater extension of the styles, it then reminds us of that of some *RUDBECKIAS*. A greenhouse plant, thriving in a mixture of peat-earth and hazel-loam.

The drawing was made at the nursery of Messrs. Whitley Brame and Milne, King's Road, Parson's Green.

a A floret of the ray. *b* A floret of the disk: slightly magnified. *c* A vertical section of the calyx, showing the receptacle deprived of all the florets.



Lyd Edwards, del.

Shetty J. Shetty, 17/10/1815

... 1815

SENECIO speciosus.

Red-flowered groundsel.

SYNGENESIA POLYGAMIA SUPERFLUA

SENECIO. (Recept. nudum. Sem. papposum.) Flores flosculosi, aut radiati, ligulis aut flosculis marginalibus foemineis. Cal. simplex, quasi monophyllus, erectus conicus, basi calyculatus s. cinctus squamulis apicè sphacelatis aut nigrescentibus, maturatione reflexus. Pappus pilosus. Suffrutices aut sæpiùs herbæ; folia integra aut pinnatifida; ligulæ quorundam rubentes, quorundam brevissimæ ferè flosculosæ. Jussieu. gen. 181.

Div. Floribus radiatis: radio patente. Foliis pinnatifidis.

S. speciosus, corollis radiantibus, caule subsimplici nudiusculo, foliis radicalibus petiolatis oblongis sinuato-pubescentibus. *Brown in Hort. Kew. ed. 2. 5. 43.*

Senecio speciosus. Willd. sp. pl. 3. 1991.

Senecio Pseudo-China. Andrews's reposit. 291; (nec aliorum.)

Herba perennis, graveolens, pilis asperiusculis glanduliferis tecta; radix fibrosa; caulis tereti-striatus, nunc infrà uniramosus, suprà subaphyllus; folia semiamplexicaulia, infernè caulina, longitudine 3-5-unciali, latitudine vix unquàm unciali, elongato-lyrata, inæqualitèr obtusèque sinuato-excisa, acutè dentata, basi subauriculata & utrinq̃ue deflexa, pubescentiâ à prono sæpè purpurascens; unum aut et alterum in summo caule, sagittato-lanceolatum. Flores pauci (3-4?), odori, pro genere magni, saturatè purpurei, corymboso-terminales; pedunculi bracteâ appressâ ad basin. Cal. semuncialis, cyathoidi-cylindricus, virens, squamulis paucis lineari-subulatis inæqualibus apice purpureis imbricatus. Radius sesquiunciam transversus; flosc. plures, stellato-distantes, diametro disci duplo v. magis longiores, ligulâ planâ lineari-oblongâ, 5-nervi, obtusâ & apice levissimè tridentatâ; tubus haud multùm brevior, filiformis, germine 3-plo longior: stylus parùm exsertus; stig. 2, linearia, replicata. Discus hermaphr., numerosus; flosc. infundibuliformes; tubus gracilis, faux brevior campanulata, limbus stellatus, acutus, purpureus; anth. atropurpurea, pro maximâ suâ parte exserta: stigmata purpurea, filiformia, ad usque inter fissuras antheræ reflexa, apice (sub lente) orbiculato-pubescentia. Germen in flosculo utroque simillimum, graciliùs tereti-striatum; pappus simplex, pilosus, longitudine tubi florum. Recept. planum nudum.

An ornamental species of a genus where few such are to be expected. The foliage has a rank weed-like smell, not unlike that of the common Dead-nettle; the bloom however, which is produced about May or June, is rather fragrant. The stem rises from a foot to a foot and a half high; the leaves have sometimes the appearance of being radical, but when the stem is fully grown out they will be

found to be all truly cauline, although situated low; these have sometimes a purplish hue beneath, owing to the pubescence having there assumed that colour, but are more commonly all green. The part of the world to which the species naturally belongs, seems not to be precisely determined. We have heard it called siberian by some, chinese by others. Introduced by Mr. George Slater in 1789. It is a hardy greenhouse-plant, requiring no particular treatment; and is propagated by off-sets from the root, which are however produced but sparingly.

The drawing was made at the nursery of Messrs. Colville, in the King's Road, Chelsea.

a The calyx. *b* A floret of the disk, with germen and pappus. *c* The same of the ray. *d* A vertical section of the calyx, to show the enclosed receptacle.



Sgt. Edwards del.

Pub. by J. Ridgway 170 Piccadilly. Aug^o 1. 1815

Smith sc.

PÆONIA albiflora. β.

Esculent Peony.

POLYANDRIA DIGYNIA.

PÆONIA. (Capsulæ polyspermæ, intus dehiscentes. Petala regularia.) Cal. pentaphyllus aut 5-partitus. Pet. 5. Germ. 2-5, (cincta membranâ communi variæ profunditatis); styli 0; stig. 2-5, capitata. Caps. tomentosæ; semina ovalia, succo rubro colorata. Folia sæpè magna, 1-2-pinnata aut 1-2-ternata, foliolis lobatis; flores subsolitarii terminales magni, variè purpurei aut rariùs albid. Jussieu. gen. 234.

P. albiflora, foliis biternatis: foliolis ovato-lanceolatis integris nudis capsulis recurvatis glabris. Willd. sp. pl. 2. 1222.

Pæonia albiflora. Pall. ross. 1. 92. t. 84. Hort. Kew. ed. 2. 3. 316.

Georgi beschr. des russ. reichs. 3. 4. 1049.

P. lacteo flore, foliis utrinque viridantibus et splendentibus. Amman. ruth. 77. n. 103. Gmel. fl. sib. 4. 184. n. 13.

(α) *P. albiflora.* Andrews's reposit. 64.

(β) *P. edulis.* Salisb. parad. lond. 78.

(γ) *P. albiflora flore pleno.* Andrews's reposit. 612.

Herba perennis. Rhizoma tubera plura fusiformia demittens. Caulis è vaginâ radicali, erectus, rigidus, crassitudine calami, vix angulosus, sesquipedalis. Folia alterna, distantia petiolo longo stricto, biternata et modò ulterius divisa ad simplicia atque integra; foliola horizontalia, ovali-lanceolata, saturatè viridia in nervis rubentia, glabra, subtus lucida pallida et varicoso-nervosa, margine ciliolato-asperiuscula, ad summum sesuncialia latitudine biunciali. Flores subtrini, solitarii, axillares summo terminali, fastigiantes, pedunculo longo foliolis nonnullis vagis diminutis stipato. Cal. persistens ex foliolis herbaceis cum aliis coloratis oblato-rotundatis intermixtis. Cor. petala 8-10, albo-erubescens, obovata, rotundata, margine summâ integra v. denticulato-erosa, sesqui-biuncialia. Germ. sæpiùs 3, rariùs 5, glabrata, rubra; membrana perigyna brevissima, plicatim corrugata margine inæquabili, hinc indè fissa; stig. continua, glabra, laminosa, ovata, introrsum complicantia, extrorsum recurvata.

A hardy herbaceous perennial plant, native of the furthest parts of Siberia. The root, which consists chiefly of a fascicle of parallel cylindrically tuberous fibres, is said, in the "Flora rossica," to be used by some of the Tartar tribes, as an article of food; and its seed reduced to powder, as an ingredient of their tea. The bloom of the present variety is large and showy, diffusing a very powerful, and to some people not unpleasant scent. The species was introduced by the Chevalier Pallas in 1784. Flowers about

June. We are told of both a single and double variety with petals of a fine rose-colour. We have not seen either.

The peculiar membrane which in this genus surrounds the group of germens, in the present species is narrow and inconspicuous; but in a chinese one, supposed to be the single-flowered *PÆONIA Moutan*, envelops them entirely. By some botanists we find this part considered as an inherent and peculiar feature of the genus; by others as an incidental and partial excrescence. Mr. Brown, who had observed in the double variety of *Moutan*, that where there was an incipient multiplication of the group or body of germens, these formations were constantly accompanied by separate imperfect ones of this part; tells us that subsequent observations have counterbalanced the weight he at first attached to this fact, and that he is now inclined to give but little importance to the part, at least as a generic feature.

The drawing was made from specimens for which we have to thank Mr. Sabine, of Edward Street, Cavendish Square.

a The calyx. *b* A stamen. *c* The pistillums. *d* The perigynous membrane.



Spilostemum etc.

Colby J. Putnam & Co. Portland, Aug 21 1875.

Smith Sc



PANCRATIUM ovatum.

Oval-leaved Sea-daffodil.

HEXANDRIA MONOGYNIA.

PANCRATIUM. *Inflor.* umbellata in scapo terminalis spathâ bi-plurivalvi; rariùs uniflora. *Cal.* 0. *Cor.* supera, infrâ tubulosa, limbo sexpartito, radiato. *Fil.* fauce tubi imposita, erecto-divergentia, infrâ à membranâ variæ altitudinis in coronam connexa: *anth.* introrsum vibratiles. *Germ.* polyspermum, v. sæpè loculis dispermis. *Stylus* corollæ subæqualis, inclinato-assurgens: *stigma* simplex, trinave linearia. *Caps.* 3-loc., 3-valv., valvis medio septigeris: *sem.* plurima, vel pauca, aut abortu solitaria atque loculo conformia.

Bulbus tunicatus. Folia bi-v. plurifaria, angustè ligulata ad elliptico-lanceolata, rarò angustè semitereti-petiolata laminâ transversè latiore. Flores erecti aliquandò à limbo nutantes. Testa seminis rariùs nigrescit. A CRINO tantùm propter stamina monadelphæ diversum. Aliàs accedit AMARYLLIDI ad ejusdem species cum fauce membranaceo-fimbriatâ. Distinguitur NARCISSO ex coronâ fauciali colligante stamina ipsi longiora, neque ac in eo breviora includente.

Div. Multifloræ.

P. ovatum, sessiliflorum; foliis bifariis, ovalibus, utrinque breviter attenuatis, striatis; tubo tereti, estriato, limbum subæquante; lacinii linearibus infrâ medium involuto-crispatis: coronæ dentibus integris.

Pancratium ovatum. *Mill. dict. ed. 6. (Lond. 1771. 4to.) n. 9.*

P. amœnum. *Andrews's reposit. 556; (figura parùm bona, sed huic à certiori jure pertinens quam amœno, cui quidem incertò datur in Curt. mag. No. 1467). Nec aliorum.*

P. amboinense. *β. Lin. sp. pl. 1. 419.*

P. foliis ovatis, nervosis, spatha multiflora, staminibus nectario longioribus. *Mill. dict. ed. 7. n. 9.*

P. foliis amplis ovatis acuminatis petiolatis, spatha multiflora, staminibus nectario longioribus. *Trew. ehret. tab. 28.*

Folia plura, reclinata, pedalia magisve, 4-6 uncias lata, deorsum in petiolum aliquoties angustiores pluriès breviores parùm crassiorem attenuata. Scapus foliis æquilongus, glaucus, complanato-anceps, margine utrinque membranaceo-acutâ. Spatha 6-8-flora, herbaceo-albicans, plurivalvis, tubo brevior, erecta, valvis extimis oblongis obtusis. Cor. candida; tubus 2-uncialis, strictus, obsoletissimè 3-gonus, limbo supernè radiato-recurvo subæqualis; lacinie exteriores subangustiores vix duas lineas latæ, viridi-mucronatæ: corona tubulato-infundibuliformis à limbo tota libera, dentibus senis interstamineis acutis integris. Stam. ex limbo unâ quintâ parte breviora: anth. graciles, fulvæ. Stig. viride, subcapitellato-depressum.

Four closely resembling species of this genus, all from the West Indies, have for a long time been cultivated in

our stoves; and have created some perplexity among botanists as to their distinction. Three of these, viz. *caribæum* (*fragrans* of the 2d edit. of Hort. Kew.), *amænum*, and *speciosum*, have been correctly figured in Curtis's Botanical Magazine; and we have now an opportunity of publishing the fourth, the one of the least frequent occurrence. This may be distinguished at first sight from the other three by a smaller flower, much slenderer in all the parts, and by a proportionately far broader foliage. Linnaeus has made it a variety of *amboinense* in his second edition of the Species Plantarum, evidently from a very imperfect acquaintance with both; no two plants that can be included in the same genus being more widely and clearly distinct when sufficiently known. Miller, by whom the present species was cultivated, has recorded it in the sixth and last quarto edition of his Dictionary, by the name we have adopted; but we do not find that it has since been received into any systematic enumeration of vegetables as a separate one. It approaches *amænum* (lately published in Redouté's Liliacées, tab. 413, by the name of *fragrans*) the nearest of any other; but still differs, beside the smallness of the flower and breadth of the foliage, by a tube that has no trace of an hexangular form, by a limb, that, instead of being a third longer, is scarcely equal to the tube, and by a crown in which the interstaminate teeth are entire, and not bipartite. All the four species are very fragrant, and if kept constantly in the bark-bed will flower twice, and sometimes even thrice a year. The figure we have adduced in the synonymy from the Botanist's Repository, we formerly believed to belong to *amænum*, but now think that it has been more probably intended for *ovatum*; in truth, it is hard to say where it belongs. *Ovatum*, though of long standing, is far from a common plant in our collections; it is inferior, in point of ornament and fragrance, to the other three, especially to *speciosum* and *caribæum*, of which last a correct and characteristic figure has been very lately given in Willdenow's "Hortus berolinensis" (tab. 73).

The drawing was made from a plant which flowered in the hothouse in Mr. Griffin's garden at South Lambeth. The stem was about the length of the outer leaf, which was about one foot long and half of one broad.



Lyd. Edwards. del.

Painted by J. Rodgway 170 Piccadilly, Aug 1. 1815.



ECHIUM candicans.

Hoary Tree-Viper's Bugloss.

PENTANDRIA MONOGYNIA.

ECHIUM. *Suprà fol.* 36.

E. candicans, caule fruticoso, foliis lanceolatis nervosis ramisque hirsutis, foliolis calycinis oblongis lanceolatisque acutis, stylis hirtis. *Hort. Kew.* 1. 186.

Echium candicans. *Lin. suppl.* 131. *Syst. veg. ed.* 14. 189. *Jacq. coll.* 1. 44. *ic. rar.* 1. 30. *Willd. sp. pl.* 1. 782. *Hort. Kew. ed.* 2. 1. 299.

Planta arborescens, erecta, ramosa, modò orgyalis, cortice cinereo, rimoso; rami suprà transversim cicatrizati, novelli crassi, succulenti, stricti, hirsutiùs villosi, approximàtè nec verò confertim foliosi. Folia numerosa, spithamæa, sparsa, patentissima, modò passim subverticillata v. rariùs passim per paria opposita, villoso-canescencia, in nervis præcipuis scabrida, angustiùs lanceolata, in acumine longinquè attenuata, suprà immersè nervosa nervis ascendentèr prolongatis, subtilis varicosis; in petiolum semiteretem basi dilatatum attenuata. Panicula cylindrica spicata rami terminatrix; spiculæ multæ, modò raræ & remotiores, modò in cylindrum pyramidatum imbricato-congestæ, pedunculatæ, sparsæ, axillares in foliis supernis diminutis, ex partim retroflexis sensim arrigendæ, biseriato-secundæ, bracteis parvis foliaceis persistentibus lanceolatis singularibus externè ad utrumque latus stipatæ. Cal. herbaceus, hirsutus, æqualis, segmentis lineari-lanceolatis, obtusulis. Cor. è minoribus generis, dilutè roseo-cærulescens, æqualis, subbilabiata, obtusa, extùs pubescens. Stamina longè exserta, assurgentia, sæpiùs rubentia.

The white hue so conspicuous in this plant, and which has suggested the specific name, is communicated by a short thick villous pubescence that covers nearly every part of it. The stem is of a close-grained hard wood, and sometimes nearly two inches in diameter near the base. The bloom is produced in April and May, and continues long in beauty, the flowers expanding themselves in succession as the numerous spikelets, which are rolled inwards and point towards the axis of the common panicle, proceed in evolving themselves to complete extension.

Monsieur Ventenat has expressed a doubt whether the figure we have quoted from Jacquin's works, really belongs to this species; but seems to have overlooked the reasons assigned in the "Icones rariores" for the peculiar appearance of the specimen from which that figure was taken, the stock of which is said to have assumed the one more

usual to the species as it advanced in age. We own we do not see any cause to question the specific identity of the plants; and the acutest and most diligent of synonymists, Mr. Dryander, although aware of the objection (as it appears he was by a manuscript note in the Banksian Library), has adopted it for the synonym of our plant in the last edition of the *Hortus Kewensis*.

This shrub is usually kept in the greenhouse; but we are told does better when planted against a wall in a border of light sandy soil in a southern aspect, where it survives our common winters and produces an infinitely finer bloom. We have seen the inflorescence of some so treated more than a foot long, and very crowded. Native of the island of Madeira, where it grows on rocks, and is said to attain the height of six feet or more. Introduced by Mr. Masson in 1777.

The drawing was made from a plant in Mr. Creswell's conservatory, Earl's Court, Brompton.

a The calyx. *b* The corolla dissected vertically. *c* The pistil,



J. Edwards del.

Collected by J. H. Gregory 1700. Preserved by Aug. 1. 1875.

June 1875

MELIANTHUS major.

The great Honey-flower.

DIDYNAMIA ANGIOSPERMIA.

MELIANTHUS. *Cal.* magnus profundè 5-fidus coloratus persistens, laciniis inæqualibus, infimâ remotâ cæteris minore, deorsum gibbâ & cucullatâ, intus cavâ & fovente glandulam mellifluam (ex disco hypogyno hinc enatam?) membranâ propriâ conduplicatâ cinctam. *Pet.* 5 ligulæformia; 4 inferiora declinata, glandulæ inserta extra membranam, basi & apice distincta, medio agglutinata; quintum nunc cæteris proximum, nunc procul inter lacinias 2 calicinas superiores enatam. *Stam.* 4, germini circumposita; horum *filamenta* 2 superiora distincta, 2 inferiora breviora basi connata inter germen & glandulam media; *anth.* incumbentes. *Germ.* 4-striatum; *stylus* 1; *stigma* sub 4-fidum. *Caps.* membranacea vesicaria 4-loba, 4-loc.; *loculi* medio 1-spermi, compressi alæformes, suprâ distincti & angulo interiore dehiscentes, infrâ margine connati in dissepimenta angusta, introrsum apice incisa pro seminum receptaculo centrali; *sem.* subrotunda, nitida; *embryo* cotyledonibus parvis, *radiculâ* longiore intra *albumen* carnosum. *Frutex*; *folia* alterna, impari-pinnata petiolo alato, stipulacea stipulis distinctis aut in unam petiolo intus adnatam connatis; *flores* spicati axillares aut terminales, singuli bracteati. Jussieu. gen. 297.

M. major, stipulis solitariis petiolo adnatis. Willd. sp. pl. 3. 402.

Melianthus major. Lin. sp. pl. 2. 892. Mill. dict. ed. 8. n. 1. J.

Miller illustr. Hort. Kew. 2. 367. ed. 2. 4. 69.

M. africanus, Herm. lugdb. 414. t. 415.

Suffrutex modò orgyalis, radice latè repente. Caulis cuniculatus, basi crassitudine pollicis. Folia decursivè pinnata, amplexicaulia, glaucissima, trita digitis narcoticè olentia; foliola ovalia, acutè serrata: stipulæ in unam auriculato-cordatam supra petiolum connatæ. Racemus erectus, laxè spicatus, subconcolor; bracteæ simplices, cordato-acuminatæ pedicello tereti-striato & corollam æquante parùm breviores. Stam. subulata, longitudine calycis. Stylus sitû horum; subulatus. Germ. 4-gonum, 4-dentatum.

Native of the Cape of Good Hope; whence it was brought to Holland in the year 1673, and thence to England by Mr. Bentinck, afterwards Lord Portland.

An undershrub, (that is, a perennial plant, which is partly woody and partly herbaceous) sometimes attaining the height of ten feet, or even more, and spreading itself in all directions by suckers: stem piped, woody below, herbaceous above; leaves large, grey, decursively pinnate; leaflets in four or more pairs, with a single terminal one,

oval, deeply and evenly serrate, when bruised diffusing an unpleasant narcotic smell: *raceme* of a purple-chocolate-colour; if shaken dropping a sweet brownish liquid, which is secreted by its peculiar nectary, placed within the bag or spur at the base of the lower segment of the calyx, and from which the genus has obtained its appellation. To the natives of the Cape and its neighbourhood this juice is a well-known dainty, and when the plant is in bloom the flower is unfailingly plucked by the first of them that descries it.

The calyx is here the conspicuous feature of the inflorescence; the corolla being both inconspicuous and fugacious. The last has been rightly described as of five petals by Jussieu, not of four, as we find it said to be in the *Genera Plantarum* and subsequent compilations. When the flower is reversed, it reminds us of some insect of the grasshopper kind.

Usually kept in the greenhouse; but Miller says, the surest method to have it flower, is to plant it in the open ground, and to cover the shoots in frosty weather, so as to prevent their being killed at the top; having first chosen a wall with a southern aspect, and placed the plant in dry rubbish, that it may shoot less vigorously, be consequently less succulent, and therefore farther without the influence of frost. For, if the stalk is killed at the top, although it sprouts again, it will not flower the same season. Multiplied by suckers taken off at any time from March to September. In favourable summers it ripens seed.

The drawing was taken at Mrs. Howard's nursery, King's Road, Little Chelsea, in May last.

a The flower as it appears when the calyx has been removed. *b* The nectary taken from the segment of the calyx which contained it. *c* The separate fifth petal of the corolla. *d* The four coherent ones of the same. *e* The pistil.





Lyt. Edwards. del

Pub. by J. Ridgway 170 Piccadilly Aug 1. 1845

Lith.

ROSA sulphurea.
Double yellow Rose.

ICOSANDRIA POLYGYNIA.

ROSA. (Germ. plura indefinita, calyce urceolari suprâ coarctato tecta, quasi infera, singula monostyla. *Sem.* totidem.) *Cal.* urceolaris collo coarctatus, suprâ 5-fidus laciniis oblongis, 2 nudis, 2 utrinque appendiculatis, 1 hinc tantum appendiculatâ, (rarè omnibus nudis). *Pet.* 5. *Stam.* brevia. Singulo *stylo stigma* simplex. *Cal.* baccatus sphæriceus aut ovoideus, limbo persistente coronatus, fovens semina numerosa oblonga hispida. *Frutices*, plerique aculeati aculeis sparsis; *folia impari-pinnata* (rarè simplicia), *stipulis alæformibus* (rarè spinæformibus) imo petiolo communi adnatis; *flores solitarii aut subcorymbosi terminales*, sæpè magni, in hortis pleni. Jussieu. gen. 335, et 452 in app.

R. sulphurea, germinibus globosis, petiolis cauleque aculeatis, aculeis caulinis duplicibus majoribus, minoribusque numerosis, foliis ovalibus. *Hort. Kew.* 2. 201.

Rosa sulphurea. Willd. arb. 305. sp. pl. 2. 1065. Miss Lawr. ros. t. 77. *Hort. Kew.* ed. 2. 3. 258. Smith in Rees's cyclop. sub verbo Rosa, n. 3.

R. lutea. Brotero fl. lusit. 2. 337; (nec aliorum).

R. glaucophylla. Ehrh. Beitr. 2. 69.

R. hemisphærica. Herrmann. ros. 19.

R. lutea multiplex. Park. par. 417. t. 415. f. 6. Ger. emac. 1267. f. 6.

R. lutea s. flava maxima fl. pl. *Hort. Eyst. vern. ord.* 6. fol. 2. f. 4.

R. flava pleno flore. Clus. hist. 114. et app. alt. & cur. post. 6.

Frutex modò *orgyalis*, cortice badio-fulvescente: folia 3-4-pinnata, foliolis glaucissimis ellipticis v. obovatis, simpliciter serratis; stipulæ laceræ. *Cal. oblato-hemisphæricus*, pube glandulosâ hispidâ frequentiori sed non densâ conspersus.

The history of the plants that compose this popular genus, which has appeared in the last fasciculus of Rees's Cyclopædia, coming from the pen of Sir James Smith, it would be an injustice to our readers to omit availing ourselves of the account of the present species.

“This fine and singular species, strangely confounded by
“many botanists, with *Rosa lutea*, was received by Clusius
“from the Levant, but its native country is not precisely
“known. It has been cultivated in England for near 200
“years, and is perfectly hardy as to cold, but very impatient
“of low, confined or smoky situations; nor does it in the most
“favourable often expand its copious, and truly glorious

“ flowers to advantage. We have seen them in the greatest
“ perfection, on a poor gravelly soil, exposed to east winds,
“ about out-houses and hovels, where no care was taken of
“ the plant. The bush is larger than in *R. lutea*, and evi-
“ dently distinguishable by the pale glaucous hue of its
“ smooth inodorous leaves. The prickles of the stem are of
“ two kinds; some twice as large as the others. Flowers
“ large and very double, without scent; of a rich but deli-
“ cate golden yellow, their inner petals when perfect so pro-
“ fusely and elegantly crumpled, and so brightly transpa-
“ rent, that neither the structure, nor the colour of any
“ other rose, can give the slightest idea of their beauty;
“ much less has any artist, except perhaps Van Huysum, in
“ one or two of his finest pictures, done this flower tolerable
“ justice. The flower is well drawn in the old Hortus
“ Eystettensis.”

We must not however pass over old Parkinson, to whom we owe the first detailed account of this fine shrub; an account that in spite of quaint style and homely language has not yet been surpassed in distinctness of description, or in information relating to the economy of the plant. At that early period of its introduction (before 1629) our author had observed the bad effect of the vicinity of London on its growth, as well as the difficulty there was of having it bloom perfectly in any part of this country. He remarks the round flattened calyx, the blue foliage and the even serrature of the leaflets, as distinguishing it from all other roses. Nor has the pale opaque yellow of the outer petals of the flower, as distinguished from the bright golden colour of the inner ones, escaped him. Had it scent, he adds, it would be of all others of highest esteem. He tells us it was first introduced from Constantinople by a merchant of the name of Lete, that with him it failed; and was again imported from the same place by a merchant, called Franqueville, with whom it prospered; and to whom we probably owe the stock now in our gardens.

Miller, who is at fault throughout in regard to this plant, asserts that it was brought by the French from Canada; if so, it must have been first carried there. Some old books attribute the yellow colour of the flower to a rose having been ingrafted on a stock of the Broom-plant!

Our drawing was made from a specimen kindly sent to Mr. Edwards by Mrs. Vicary of Holywell, near Oxford, obtained from a garden belonging to Mr. Justice at Sutton, near Abingdon.



Edw. Edwards del.

Publ. by J. Ridgway 170 Piccadilly, Sept^r 1. 1843

Smith. Sc.

ignota

PROTEA (longifolia.)

Long-leaved Protea.

TETRANDRIA MONOGYNIA.

PROTEA. *Suprà fol. 20.*

P. longifolia, foliis elongato-linearibus basi attenuatis, involucri turbinati bracteis glabris acutis imberbibus, corollæ aristis laminâ longioribus, stylo pubescente apice curvato. *Brown in linn. soc. transact.* 10. 83.

Protea longifolia. *Andrews's reposit.* 132, 133, 144. *Persoon. syn.* 1. 116. *Hort. Kew. ed. 2.* 1. 190.

Protea vidua. *Recens. pl. in reposit. botan. depict.* 39. n. 129.

Protea Lepidocarpodendron. *Herb. Linn.*

Lepidocarpodendron, foliis angustis longis salignis nervo rubro; florum plumis violaceo-purpureis. *Boerh. lugdb.* 2. 186; cum icone.

Folia numerosa, patentissima, spathulato-ligulata, angusta, nuda, avenia, papillis minutissimis albidis (sub lente) densissimè conspersa, sesuncialia v. ultra, 3-4 lineas lata, acumine obtuso. Bractæ exteriores involucri ovato-lanceolatae, interiores lineari-lanceolatae. Corollæ involucro æquales vel nonnihil longiores, hirsutiùs lanatae sed non densè, pilis in aristis atropurpurascentibus. Stylus biuncialis, albo-villosus, subulato-attenuatus, compresso-teres, flexurâ brevi infra stigma. Stigma subulatum, acutum, glabrum, hinc basi nodo obliquo subsemicirculari protuberans.

A species that may be known by its long narrow foliage from all its nearest akin that are yet recorded. It is more rare, and multiplied with greater difficulty, than the *pulchella* of the twentieth article of this work. The bloom is less showy than in that, yet of considerable beauty, but not so freely produced. We find no account of the size the shrub acquires, and it is needless to speak from the single specimen we have seen in a greenhouse, and of which we knew not the age. What we have already said concerning the treatment of *pulchella* in the article we have mentioned, applies equally to the present species.

Introduced by Mr. Masson from the Cape of Good Hope in the year 1790.

The drawing was made at the nursery of Messrs, Lee and

Kennedy, Hammersmith, the only place in which we have met with it.

a The broad lip of the corolla with three of the stamens. *b* The narrow lip of the same with the fourth stamen. *c* The upper part of the style with the stigma.



Syst. Edwards del.

Publ. by J. Killygrew 170 Piccadilly Sept. 1. 1815.

Smith Sc

DIGITALIS canariensis.

Canary shrubby Fox-glove.

DIDYNAMIA ANGIOSPERMIA.

DIGITALIS. *Cal.* 5-partitus inæqualis. *Cor.* basi tubulosa, suprà dilatata patens, limbo 4-(5-) lobo inæquali. (Modò adest) rudimentum quinti staminis vix conspicuum. *Stigma* simplex, aut bilamellatum. *Caps.* ovata, acuminata, bilocularis, bivalvis, *receptaculo* centrali ad ambitum marginato utrinque seminifero, dissepimenti vicem supplente, & valvis parallelo seu earundem marginibus circumapposito. *Sem.* numerosa, & minuta. *Folia* alterna, *flores* spicati terminales. *Species* pauca fruticulosæ. Jussieu. gen. 120.

D. canariensis, foliolis calycinis lanceolatis, corollæ acutæ labio superiore longiore bifido; inferioris lobis lanceolatis subæqualibus, foliis lanceolatis serratis, caule fruticoso. — *Brown in Hort. Kew. ed. 2. 4. 30.*

Digitalis canariensis. *Lin. sp. pl. 2. 868. Hort. Kew. 2. 346. Mill. ic. 1. 60. t. 120. Willd. sp. pl. 3. 298. Lamarck. ill. t. 525. f. 2.*

Digitalis acanthoides canariensis frutescens, flore aureo. *Comm. hort. 2. 105. t. 53.*

Digitali affinis *canariensis*, *solidaginis* acutis foliis levitè pilosis, flore aureo cucullato. *Pluk. alm. 40. t. 325. f. 2.*

Gesneria foliis lanceolatis serratis, pedunculo terminali laxè spicato. *Hort. cliff. 318.*

Frutex erectus, modò 5-pedalis, teres, rubro-fuscescens, pubescens, ramosus, supernè foliorum vestigiis notatus. Folia numerosa patentia, ramos infrà spicas sparsim approximate ac ferè comatim ambientia, uncias 5 plus minus longa, 2 circitèr lata, decurrentia, ovali-lanceolata, acuta, deorsum longè attenuata, decursivè petiolata, serrata dentibus brevibus mucronato-curvatis, reticulato-venosa, suprà asperius lanuginosa, infrà subtomentosa, nervis varicosis. Racemi erecti, ramos spicatim terminantes, laxius multiflori, simplices, pedunculo modo pedali, bracteis simplicibus, pedicellis corollâ nutante duplo magisve brevioribus. Flos omnis extus lanuginosus: lacinia calycinæ cuspidato-lanceolata: cor. subsesquiuncialis obsoletè venosa, fulvescens, intus sordidè lutescens; labium summum recurvo-porrectum acutè bifidum; infimum 3-fidum, lobi lanceolati, medius lateralibus patentibus duplo major. Stam. ascendentia: anth. vertice rotundatæ, infrà bilobo-patentes, formâ ferè ferri equini. *Stigma* simplex.

Originally raised from seed brought from the Canary Islands; and known to have been cultivated here by the Duchess of Beaufort in 1698.

A downy upright shrub, sometimes growing to the height of five or six feet, generally naked, except at the branches below the spikes, where the foliage is numerous

and close; *leaves* oval lanceolate, about five inches long, and from one to two broad, tapering for a greater length downwards than towards the summit, harsh. *Spikes* upright, many-flowered, loose, scattered, sometimes near a foot long; *corollas* of a tawny burnt yellow without, of a purer yellow within; inodorous, and shaped like those of the ACANTHUS or Bearsbreech. The bloom begins to show itself in May and June; and there is generally a succession of it on the same plant until winter arrests the progress.

Commonly raised from seed. The soil it prefers is a light sandy loam. Requires merely a protection from frost, but should be otherwise kept as hardily as is consistent with that precaution, and supplied with plenty of water.

The drawing was made from a plant in the extensive nursery of Messrs. Whitley, Brames, and Milne, King's Road, Parson's Green, Fulham.

a The calyx and pistil after the corolla has been removed. *δ* The lower segment of the corolla dissected, so as to show the insertion and position of the stamens.



Hydrocotyle det.

Collected by J. Ridgway 170 Pecanville, Sept. 1, 1895.

Smith. Sc.

RICOTIA ægyptiaca.

Egyptian Ricotia.

TETRADYNAMIA SILICULOSA.

RICOTIA. Cal. (tetraphyllus) connivens. (Corollæ) petala (4 in crucem disposita, unguiculata,) apice plana obcordata. Stylus 0. (Silicula oblonga sessilis: valvis planis; septo oblitterato unilocularis. Cotyledones accumbentes obcordatæ. Brown in Hort. Kew. ed. 2. 4. 98.) Folia pinnata; foliolis lobatis. LUNARIÆ fructus sed unilocularis angustior. Sem. circiter 4. Jussieu. gen. 239.

R. ægyptiaca, foliis pinnatis: foliolis incisis, floribus racemosis, siliculis pendulis. Persoon. syn. 2. 194.

Ricotia ægyptiaca. Lin. sp. pl. 2. 912. Hort. Kew. 2. 386. ed. 2. 4. 98. Willd. sp. pl. 3. 477.

Lunaria ægyptiaca. Mart. Mill. Dict. n. 3.

Lunaria Ricotia. Gærtn. sem. 2. 289. t. 142. f. 1. Roth. catalecta bot. 3. 51.

L. foliis supradecompositis: foliolis trifidis, siliquis oblongis pendulis. Mill. ic. 2. 113. t. 169.

Cardamine Lunaria. Lin. sp. pl. ed. 1. 2. 656.

Planta annua, debiliior et modò diffusa, tota glabra. Caulis ramosus, pede communiter brevior. Folia inferius caulina, impari-pinnata, distantèr bijuga; foliola petiolata, laminâ latâ rotundatâ integrâ v. sæpius lobato-incisâ. Racemi multiflori, ramorum continui, erectiusculi, sensim elongandi; pedicelli flore breviores, ebracteati, distantes, sparsi. Cal. subcoloratus, foliolis lineari-oblongis, apice patulis, 2 alternis basi gibbis et saccatis. Cor. erecta, purpurascens, alba in disco; petalorum ungues angustissimi, calyce parùm altiores. Stam. longitudine unguium. Pistillum his vix æquale: stylus subnullus: stigma in sensû illi à quo comprimitur germen contrario compressum, obtusius lanceolatum, secundum utramque aciem pubescens. Silicula membranacea, subdiaphana, lanceolato-ovalis, subrhomboidea, unciam vix unam longa: sem. pauca, orbiculata, lenticulari-compressa.

An annual plant, by no means common, although of long standing in our gardens, having been cultivated in 1757 by Miller; who says that it had been brought a few years before from Egypt to the royal gardens at Paris. Very like the common annual or mediterranean Stock.

The genus was instituted by Linnæus, and distinguished from LUNARIA, chiefly by its sessile unilocular silicle, which is not, as in that, conspicuously pedicled and divided into two loculaments by a persistent detached dissepiment parallel with and equal to the valves.

Gærtner has however subsequently asserted that such a dissepiment is present in *RICOTIA*, and has given in his carpological work an engraving of its silicle, in which that part is shown as complete and distinct as in *Lunaria*, only not so conspicuously pedicled. Willdenow has replied, and maintained that Gærtner has figured a silicle of *LUNARIA rediviva* for one of *RICOTIA ægyptiaca*. Dr. Roth, in his "Catalecta botanica," rejoins in support of Gærtner, and avers that the dissepiment is always present in the unripe silicle, but being of a very tender delicate substance, it breaks from the frame of the suture, and adheres to the valve opposite to that on which the seed is seen to lie, showing itself in partially detached scaly fragments. But Gærtner's figure is plainly of a ripe silicle belonging to the present plant (and not, as Willdenow gratuitously avers, to *LUNARIA rediviva*); in which, however, no one else pretends to have seen a dissepiment in the state he has represented it. So that we are to suppose either that he has met with an anomalous specimen, or (with less candour) that he has presented us with an offspring of his prepossession. Mr. Brown, whose accuracy merits the greatest confidence, has always found this part ultimately obliterated, although clearly present in an early stage.

Sir James Smith has recorded a new species (*tenuifolia*) in the first part of the second volume of the "Prodromus Floræ græcæ;" in a note on which Mr. Brown is made to say, that "the fruit of the genus is not constantly unilocular;" which seems to us to be in no way the equivalent of what he has said himself concerning that part, in the character we have quoted from the Hortus Kewensis.

The seed should be sown in a sheltered border, where the plants are to remain. This will come up in the autumn, and the plants will flower early in the summer. It may be also sown in the spring; when the plants will flower later.

The drawing was made at the nursery of Messrs. Lee and Kennedy, Hammersmith.

a The calyx. *b* A petal. *c* The six stamens. *d* A germen. *e* One valve of the silicle after the opposite one has been removed, showing the position of the seed. *f* A seed dissected so as to show the embryo, the radicle of which is seen to be placed opposite the fissure of the cotyledons, and in relation to these called accumbent.



FUMARIA eximia.

Lyon's new Fumitory.

DIADELPHIA HEXANDRIA.

FUMARIA. Cal. minimus. Pet. inæqualia & irregularia, quorum 1 vel 2 basi calcaratum. Fil. 2, basi latiora & approximata, singula triantherifera, antherâ mediâ biloculari, lateralibus forsan unilocularibus. Stylus brevissimus; stigma orbiculatum bisulcum. Siliqua monosperma brevis non dehiscens, aut polysperma longior bivalvis, aut capsularis globosâ inflata polysperma trivalvis. Folia multipartita, interdum bipinnata aut biternata, racheos apice nonnunquam cirrhoso; flores spicati terminales. Jussieu. gen. 237.

Div. Corollis bicalcaratis.

F. eximia, foliis decompositis; racemo composito, racemulis bracteatis, pendulo-cymosis; corolla infra cordata, lobis posticis brevissimis extorsum lato-rotundatis, introrsum conniventibus; fauce bilobo-apiculatâ; stigmate in laminam cruciato-quadratam bimucronatam compresso.

Folia lævia, bipinnata foliolis oblongis pinnatifidis, laciniis acutulis. Caulis laud raro ramosus. Racemus multiflorus, compositus; racemuli plurimi, cymosi, sparsi, sæpè iterum divisi; pedicelli filiformes, laxi, flore pendulo triplo breviores, basi bibracteati. Corolla rosea, subuncialis, bilabiata; labia exactè æqualia, divaricata, ovali-lanceolata, in concavo disco atropurpurea; faux clausa, atropurpurea, terminata lobulo bifido, lateribus alatis. Stylus directus: stigma lamina periphæricè cartilaginea, erecta, quadricornis vel quadrata et utrinque exterius levitèr indentata.

A species of which we have not been able to trace any account. It comes very close to the siberian *spectabilis*, especially in regard to the corolla; but there the raceme is simple and the pedicles are without bractes. Perhaps other differences may exist; for the latter has not yet reached our gardens, and is only known to us by a slight description and the figure in *Amœnitates academicæ*; unless indeed a specimen in the Banksian Herbarium from Nootka Sound should prove to be the same, which we suspect is the fact.

Formosa is the nearest to *eximia* of any species cultivated in this country; but in that the lobes at the base of the corolla are longer and narrower, and not, as here, rounded and prominent at the edge; neither is the apex of the faux two-lobed, nor the stigma four-cornered, but has only two

cartilaginous corners or angles, and is herbaceous and rounded at the base. The whole plant in *formosa* is likewise upon a far smaller scale, and the foliage of a dark dull glaucous green.

Eximia was introduced by the late Mr. Lyon from North America, about four years ago. It seems not to have fallen in the way of Michaux or Mr. Pursh, at least we cannot find it in their works.

At present by far the most ornamental plant of the genus; and in a situation that suits it, soon forms a large close tuft, throwing up stems of nearly three feet in height, with bunches of flowers in proportion. The foliage is of a considerable breadth, and of a peculiarly lively tender green. Blooms in May and June. Perfectly hardy. Propagated by dividing the tuberous knobs that compose the root.

The genus has been in some recent publications separated into *CORYDALIS* and *FUMARIA*; but the editors of the *Hortus Kewensis* have not been seduced to adopt so wanton an innovation.

The drawing was made at Mr. Knight's nursery, Little Chelsea, King's Road.

a The six diadelphous stamens and pistil, as they appear when the corolla is removed. *b* The pistil after one of the sets of stamens which enclose it is removed. *c* One of the two sets of stamens. *d* A view of the inside front of one of the two petals which form the faux or centre-piece of the corolla.



Sgt. Edwards, del.

Pub. by J. B. Blythe, 170 Broadway, Sept 1, 1895.

Smith Jr.

PATERSONIA glabrata.

Grey-flowered Patersonia.

TRIANDRIA MONOGYNIA.

MONADELPHIA TRIANDRIA. (Hort. Kew.)

PATERSONIA. Cor. hypocrateriformis, regularis; Tubo gracili; Limbo sexpartito, laciniis interioribus minutis. Filamenta connata. Stylus capillaris apice sæpissimè tumido. Stigmata 3, laminæformia, indivisa. Caps. prismatica. Sem. numerosa.

Plantæ perennes. Radix fibrosa. Caulis nullus v. simplex, brevis, quandòque ramosus. Folia angusto-ensiformia, compacta. Scapus radicalis caulemve terminans simplex ebracteatus. Spatha communis bivalvis, includens partiales nonnullas, confertas, unifloras. Flores sensim erumpentes, speciosi, cærulei, immaculati, fugacissimi. Antheræ stigmataque flava. Styli apex tumidus, plerùmque medio constrictus. Stigma deflexum. Capsulæ spathis tectæ. Semina sæpiùs angulo interno loculi, nunc columnæ centrali affixa. Brown. prod. 1. 303.

P. glabrata, stigmate deflexo, corollæ laciniis interioribus dimidium tubi staminei æquantibus, scapo caule longiore spathisque glaberrimis nitidis, foliorum carinâ baseos lanatâ. Brown, ubi supra 304.

Caudex brevis cæspitoso-ramosus, badio-fuscescens. Folia erecta, divergentia, collateral-disticha, infernè equitantia atque purpurascentia, plura in singulo fasciculo, lineari-ensata, striata, glabra, firmula, hinc convexiuscula, margine obsolete ciliata. Caulis modò altior, modò subbrevior v. his æqualis, 4-uncialis v. nunc altitudinem duorum pedum acquirens, teres, levitèr compressus, glaber. Spatha sphacelata, lanceolata, multiflora, striata, glabra; bractæ interiores carinâ subsericeæ. Cor. hypocrateriformis; tubus spathæ æqualis, ruber, angustus, triquetro-filiformis, striatus, rectus, germine duplo ultrâve longior, lanâ deciduâ infra medium consitus; limbus amplus, uncis 2 transversus, violaceo-pallescent, rotatus, infernè brevius imbricato-connivens, laciniæ interiores elliptico-obovatae, retusæ apiculo villosa, infernè à margine altero incumbentes alteri CONTORTARUM more, quod singulare nec aliubi in ENSATIS nobis obvium: interiores erectæ, saturatè violaceæ, subulatae, tubo stamineo breviores & appressæ. Stam. limbo 2plo breviora; fil. pro $\frac{3}{4}$ cuniculato-connata; anth. flavæ, erecto-divergentes, filamenta æquantes, laminiformes, ovato-attenuatae, loculis 2 angustis secundum marginem receptaculi latioris atque introrsum convexi adnatis. Stylus apice tumidus, in junctura stigmatum articulatus: stig. alba, infra unguiculata unguibus coadunatis, suprâ laminoso-lobiformia, orbiculata, reflexa, villosa, antheras æquantia; primò ab imis unguibus arrecta, inde simul ad latus alterum refracta. Germ. tubi floris isoperimetrum, lineari-prismaticum, glabrum.

One of the latest acquisitions for our gardens; and not before recorded as being to be met with in them. Found by Mr. Brown in New South Wales, in the vicinity of Port Jackson; and first introduced by Messrs. Lee and

Kennedy, who raised it, from imported seed, at their nursery in Hammersmith, where our drawing was made in July last.

A perennial herbaceous plant, with a low upright suffrutescent reddish brown rootstock, branching out into many short arms, each of which is terminated by a fascicle of several narrow ensiform edgewisely bifarious evergreen *leaves*, forming a rather close grassy tuft; *stems* solitary, upright, from between the centre leaves of each fascicle; than which they are sometimes higher, at others scarcely even with, smooth, terminated by a hard sphacelate many-flowered smooth bivalved *spathe*; *flowers* parted from each other by single membranous concealed bractes, expanding in succession, seldom two at once, tender, fugacious, of a pale violet or grey colour; each of the three large extended outer *segments* overlapping the other by one of its edges independently of the small inner alternating connivent ones, a disposition usual to the whole of the segments in the corolla of the *CONTORTÆ*; but, as far as our observation has reached, an anomaly in that of the *ENSATÆ*. The ultimately refracted group of stigmas of some of the species is likewise a peculiarity.

The genus comes nearer to *ARISTEA* and *WITSENIA*, than to any others we are acquainted with. The present appellation has been assigned it by Mr. Brown, in his valuable work on the New Holland plants, in commemoration of his friend, Colonel Paterson, formerly Lieutenant-Governor of the colony of New South Wales; a gentleman whose name has been long familiar to the naturalist. In adopting it, a slight *passe-droit* is manifestly offered to Monsieur Labillardière, by whom the genus had been previously established under the name of *GENOSIRIS*; less distinctly indeed, and from a single species.

Belongs to the greenhouse; thrives in peat-earth, and requires a plentiful supply of water in the summer season.

a A flower attached to its prism-shaped germen, and deprived of its three larger segments, to show the three minute inner ones, the partially monadelphous stamens and the stigmas. *b* The stamens and the refracted stigmas; somewhat magnified.





Sp. Rendell Sept 1 1845.

Smith n

CRINUM pedunculatum.

Botany-bay Lily or Crinum.

HEXANDRIA MONOGYNIA.

CRINUM. *Umbella* ramentis bracteaceis interstincta, *spatham* generalem bivalvem excedens. *Cal.* O. *Cor.* supera, regularis, tubuloso-sexfida; tubus strictus; limbus sexpartitus, radiatus, subæqualis. *Stam.* tubo adnata, indè divergentia; *anth.* lineares, vibratæ. *Stylus* reclinatus. *Caps.* membranacea, oblato-sphærica, pulvinato-triloba, 3-loc.; *sem.* numerosa, horizontalia, duplici serie cumulata, margini interiori septi utrinque annexa, anguloso-compressa, vel nunc in loculamento quod replet precociùsve dirumpit *tantummodò* unum aut alterum emollescente albumine tuberoso-laxatum.

Ab AMARYLLIDIBUS *longiùs tubulosis solummodò regularitate corollæ discrepans; à* PANCRACTIO *defectù membranæ staminilegæ. HÆMANTHO valdè affine. Bulbus modò caudicis vel stipitis ad instar productus, totus extat humo. Folia fasciculato-divergentia, oblongè loratève lanceolata, canaliculato-explicanda.*

C. pedunculatum; bulbo cylindrico, glabro; scapo centrali, lato-compresso; umbella pedunculata; stylo staminibus brevior.

Crinum pedunculatum. *Brown prod.* 1. 297.

Crinum taitense. *Redouté liliac.* 408.

Crinum australe. *Donn cant. ed.* 6. 83.

A genus connected by the closest affinity with AMARYLLIS, from the larger tubular-flowered species of which it differs only by the greater regularity in the disposition of the segments of the corolla.

The present plant is a native of New South Wales, and has been very generally confounded with *CRINUM asiaticum*; the cause, most probably, of its not having found a place in the late edition of the Hortus Kewensis. But it differs from that species, by the bulb, which grows upon a large rootstock entirely above ground, is smooth and of a cylindric form, resembling very much that of the leek, except in dimension, which varies from the circumference of a man's arm to three times that size, and even more; also by a broader flattened stem, and by a style that is shorter than the filaments. Leaves many, fasciculate, multifariously divergent, broadly lorate-lanceolate, involutely concave, smooth and entire at the edges, two or three feet

long. It is generally larger than *asiaticum*, but not so large as *amabile* the finest flower we know of this natural order.

A stove plant. Has been known in our collections, according to Donn's Hortus cantabrigiensis, from the year 1790; but we are not informed by whom it was introduced.

Multiplied both by off-sets, and bulbiform seed; of easy cultivation, and flowers freely.

The specimen from which the drawing was made was sent us from the nursery of Messrs. Colville, King's Road, Chelsea. It was small and few flowered, comparatively with many others.

α The pistil, dissected from the corolla.



Lyd. Edwards del.

Sub by J. Kelymay 170 Piccadilly Sept 1. 1845

Smith sc

ROSA provincialis. β . *muscosa*; *fl. simpl.*

Single-flowered Moss-Provins Rose.

ICOSANDRIA POLYGYNIA,

ROSA. *Suprà fol. 46.*

- R. provincialis*, fructibus subrotundis, pedunculis petiolisque hispidis, aculeis ramorum sparsis subreflexis, foliolis ovatis subtùs villosis: serraturis glandulosis. *Hort. Kew.* 2. 204.
- Rosa provincialis*. *Du Roi herb.* 2. 349. *Willd. sp. pl.* 2. 1070. *arb.* 314. *Mill. dict. ed. 8. n. 18.* *Hort. Kew. ed. 2. 3. 261.* *Smith in Rees's Cyclop. sub ROSA n. 26.*
- R. burgundica*; *provincialis*. *Persoon. syn.* 2. 48.
- R. provincialis major*, *fl. pl. ruberrimo*. *Boërh. ind. alt.* 2. 252.
- Common Provins Rose. *Miss Lawr. ros. t.* 8.
- Scarlet Provins Rose. *Miss Lawr. t.* 22.
- Blush Provins Rose. *Miss Lawr. t.* 1.
- White Provins Rose. *Miss Lawr. t.* 4.
- Childing's Provins Rose. *Miss Lawr. t.* 43.
- Blandford or Portugal Rose. *Miss Lawr. t.* 21.
- (β) Calyx pedunculi petioli ramulique glanduloso-viscosi.
- Rosa muscosa*. *Mill. dict. ed. 8. n. 22.* *Du Roi herb.* 2. 368. *Hort. Kew.* 2. 207. *ed. 2. 3. 264.* *Brotero fl. lusit.* 345. *Rössig rosen. cah.* 2. t. 6.
- R. provincialis spinosissima*, pedunculo muscoso. *Cat. pl. hort. londin.* (*A. D.* 1730) 66. t. 18.
- R. rubra pl. spinosissima*, pedunculo muscoso. *Mill. ic.* 148. t. 221. f. 1. *Boërh. ind. alt.* 2. 252.
- Double Moss Provins Rose. *Curtis's mag.* 69. *Miss Lawr. ros. t.* 14.
- Double white Moss Provins Rose.
- Single red Moss Provins Rose. *Suprà.*
- (γ) Folia floresque duplo minores.
- Rose de Meaux. *Miss Lawr. t.* 31.
- Pomponc Rose. *Curtis's mag.* 407. *Miss Lawr. ros. t.* 50.
- Rose de Rheims. *Miss Lawr. ros. t.* 71.
- To which are most akin; Rose St. Francis. *Miss Lawr. ros. t.* 88.
- Shailer's Rose. *Miss Lawr. ros. t.* 76.

In most of the late systematic enumerations of plants, the Moss Rose stands recorded as a separate species, by the title of *muscosa*. But in the more recent account of the genus by Sir James Smith, we find it merged as a variety in *provincialis*. That it is one either of that or *centifolia*, is an opinion that dates from the first mention of the plant. The

following is the account given by Sir James Smith of the species *provincialis*.

“ Native of the south of Europe, at least it is so considered, though a plant too generally cultivated for any thing to be averred on this subject. With us it is hardy, flowering in June and July. Most of the varieties are increased by roots or layers, and remain tolerably distinct; the different forms of variety γ are least permanent. *Stems* usually 3 or 4 feet high, straight, very prickly. *Leaflets* 5, of a rounded bluntish figure, veiny and rugose. *Stipulas* linear-lanceolate, acute, undivided; most entire in their lower part. *Flowers* two or three, or more, at the top of each branch, large, delightfully fragrant, of that peculiar bright crimson hue, popularly termed a rose-colour, with broad brown stains on the backs of the outer *petals*, which are permanent in the otherwise white variety, represented in Miss Lawrance's t. 4. In all our cultivated varieties the *flowers* are double, with slight remains of *stamens* or *styles*; so that the fruit never ripens. We have however seen, in the ample collection of roses at Messrs. Lee and Kennedy's, perfectly single *flowers* of the Moss Rose, which those experienced cultivators have proved to be only a variety of the Common Provins Rose. Indeed we have been told in Italy, that this variety loses its mossiness, almost immediately, in that climate.”

How the Moss Rose has been *proved* to be a variety of the Common Provins one, remains untold. The present single Moss variety, we know has not been produced in that state from seed; but reduced to it from the double or rather full state (either accidentally or intentionally) by peculiar culture. Accordingly we find it to be barren, as we should have expected from the mode by which that state had been induced; but which most probably it would not have been, had it sprung up single from the seed. The only evidence we know of a mutual variation between the Moss and Common Rose, is the similarity of the two in all points except the moss-like viscous efflorescence of the first; a difference of such a nature as may be easily supposed incidental, and indeed is admitted to be so in one of the varieties of another species of the genus.

Rossig, who has lately published a work on Roses, containing good coloured figures, says, that the Moss Rose is found on the Alps.

Brotero does not mention any tendency in it to lose its mossiness in the climate of Portugal.

Known in this country in 1724. Miller first saw it in Dr. Boerhaave's garden at Leyden in 1727, and then took it for a variety of the Provins Rose; but afterwards, finding it of more difficult increase, changed his opinion.

Usually propagated by layers. The present, as well as the double white variety, are rare and high priced.

The gardener's title of the species is by some derived from Provence; by others from Provins, the town in Champagne.

The drawing was made partly from a plant in the fine collection of roses at the nursery of Messrs. Lee and Kennedy, Hammersmith; and partly from another in Mr. Shailer's nursery, Great Chelsea.



VIOLA altaica.
Tartarian Violet.

PENTANDRIA MONOGYNIA.

VIOLA. Cal. monophyllus hinc sub petalo supremo fissus, 5-partitus laciniis basi productis. Pet. 5 inæqualia; supremum impar majus, basi corniculatum. Anth. coalitæ apice membranaceæ, fil. distincta (aut monadelphæ?) quorum 2 basi appendiculatâ in superioris petali corniculum irrepentia. Stigma acutum aut urceolatum. Caps. 3-gona 1-loc. polysperma, 3-valv. valvis medio seminiferis; embryo rectus tenuis subcylindricus in albumine carnosio centrale. Herbæ aut rarò frutices; folia alterna stipulacea; pedunculi axillares, 1-flori, flore sæpè inverso. Jus-sieu. gen. 294.

V. altaica, caulescens, glabra; foliis crassiusculis, ovatis ovalibusve, crenatis; floribus inversis, undulatis: petalis rotundatis, transversè latioribus, subreniformibus.

Perennis, cæspitosa brevis. Caules reclinato-assurgentes. Folia carnosula, firma, glabra, vix $\frac{3}{4}$ partes uncia longa, apice rotundata et petiolo longiora, vel nunc in petiolum ipsis longiorem attenuata et acutula. Petioli glabri, triquetra-canaliculati. Stipulæ binæ erectæ, elongato-oblongæ, sublyrato-incisa dentibus subtrinis in utroque latere, apice rotundatæ. Pedunculi foliis duplo vel magis altiores, scaposo-erecti, robusti, tetragoni cum sulco in dorso, læves, uti calyces livido-virentes, haud multum infra reflexum apicem bracteis 2 minutis oppositis instructi. Calycis foliola oblonga parum attenuata acumine obtusulo, margine obsolete cartilagineo-serrata, posticè truncato-denticulatâ, dentibus apice glandulosis. Cor. folio plurimum amplior, stramineo-pallescent, orificio longitudinali faucis labiato-barbata. Petala omnia imbricatione profundâ invicem incumbentia, oblato-rotundata; supremum (ob resupinationem infimum) infra medium lineis pluribus cæruleis pictum, apice retusum, basi laminæ flavicans, ungue intus barbatus, cornu recto lobos posticos calycinos vix exsuperante; lateralia supremo angustiora, infra medium striis paucis plumosis cæruleis picta, basi laminæ barbata; infima supremo his, lateralibus ter, ferè latiora, imberbia, unicolora. Stigma virens, urceolatum.

A plant that has passed very generally in our gardens for *VIOLA uniflora*, but with scarcely any better claim than that of being indigenous in the siberian districts of the russian empire as well as the other. *Uniflora* is a linnæan species, and stood at first without a synonym, but described as having a one-flowered three-leaved stem, cordate dentate leaves, with very short petioles and a dwarf peduncle; features that would by themselves sufficiently decide the difference of the plants. But Linnæus has subsequently in the Mantissa adduced for the synonym of his species, a

plant described and figured in the *Flora sibirica* of Gmelin, which makes the difference palpable, and leaves it beyond dispute. Nor do we recognise our plant in any recorded *VIOLA*. In the Banksian Herbarium we find specimens of it received from the Chevalier Pallas, which were gathered on the Altay mountains in Siberia, on the confines of the chinese dominions. It has a flower that varies in size, but which is always larger than the leaf, and the largest of any species known to us. The foliage varies from ovate rounded and longer than the petiole, to oval and slightly attenuated each way, but especially towards the petiole, which is then longer than that: a variation perceptible even in the two spontaneous specimens of the Banksian Herbarium. The whole plant is smooth, the peduncles robust, resembling scapes, and as well as the calyx of a livid blueish green; spur of the corolla scarcely extended beyond the lobes of the calyx. The blossom cannot be said to be fragrant, yet when smelled near, a bitterish, but not unpleasant odour is perceptible.

Being still rare, it is carefully kept in garden-pots in a frame or pit with the alpine plants. But seeding freely, and being easily propagated by parting the root, it will soon be common, and may then be treated like other hardy violets.

Its introduction is known to have been from Russia; but we have not ascertained precisely the time when it came, by whom sent, nor by whom received.

We should observe, that flowers produced early in the summer are often more than twice the size of those produced at a more advanced period of the year.

The drawing was made from a plant in the nursery of Messrs. Fraser, in Sloane Square. It flowers for months in succession.

a The stamens and pistil as they appear when the corolla and calyx are removed. *b* Three from the body of the five coherent stamens detached and extended: magnified. *c* A single stamen, showing the short filament, large anther with the membranous appendix on its summit: magnified. *d* Pistil, showing the ovate trisulcate germen, short style, and urceolate stigma: magnified.

DAHLIA superflua. ε.
Crimson fertile-rayed Dahlia.

SYNGENESIA POLYGAMIA SUPERFLUA.

DAHLIA. (Recept. paleaceum. Pappus nullus. Cal. duplex: exterior polyphyllus; interior monophyllus, 8-partitus. Hort. Kew. ed. 2. 5. 87.) Flosc. radii tot quot segmenta calycis, grandes, ovales haud rarò steriles. Semina compressa latere interiore prominentiore, obsolete 2-dentata. Plantæ (herbaceæ) altæ rudesque, radice (perenni) tuberosâ fasciculatâ. Caulis teres. Folia opposita, plus minus decomposita, aspera. Flores autumnales, speciosi, pedunculis longis terminales, ramulis foliisque superioribus sensim minoribus quasi paniculati, antè florescentiam cernui radio nocte connivente. COREOPSIDI proximum. Salisb. parad. 16; nonnullis mutatis.

D. superflua; caule non pruinoso, ligulis fœmineis. Hort. Kew. ed. 2. 5. 87.

Georgina superflua. Decandolle in annales du muséum. 15. 310.

Georgina variabilis. Willd. enum. 899. hort. berol. 2. 93.

(α) rubra.

G. variabilis: purpurea. Willd. hort. berol. t. 93.

G. purpurea. Willd. sp. pl. 3. 2124.

(β) purpurea.

Dahlia pourpre. Thouin in ann. du mus. 3. 423. t. 3. f. 1.

D. pinnata. Cav. ic. 1. 57. t. 80. Andrews's reposit. 408.

(γ) lilacina.

G. variabilis: lilacina. Willd. hort. berol. t. 94.

G. rosea. Willd. sp. pl. 3. 2124.

D. rosea. Cavan. ic. 3. 33. t. 265.—rose. Thouin, ubi suprâ, f. 3.

D. sambucifolia. Salisb. parad. 16.

(γ) pallida.

G. variabilis: pallida. Willd. hort. berol. t. 95.

(δ) nana.

D. pinnata: nana. Andrews's reposit. 483.

(ε) punicea. Suprà.

Radix composito-tuberosa, tuberibus elongatis, divergentibus. Caulis erectus, ramosus, glaber, orgyalis. Folia ampla, decursivè pinnata cum impari, foliolis ovatis, acutis, serratis, modò hispidiusculis, basi sæpè inæqualibus: summa sensim simplicia. Flores magni, nutantes, solitarii v. gemini, caulem et ramos in pedunculis longis patulis terminantes. Cal. exter. virens, duplo brevior, 5-phyllus, basi cum interiore confluens: inter. cylindraceo-campylnatus, fundo plano. Styli in radio haud rarò oblitterati. Discus flavus, radio aliquoties angustior; flosculorum tubus brevis gracilis, faux longior amplior, limbus erectus acuminatus. Anth. lutea, impulsu progredientis styli protrusa, indè soluto vertice editis stigmatibus intra flosculum vè elasticâ filamentorum retracta. Stig. tota exserta, divaricata, aurea, linearia et utrinque versus attenuata, villis brevibus hirsuta. Germ. utrumque simillimum, tubo flosculi brevius, obversum, compressum, subbidentato-truncatum.

This fine species constantly rising in value by the production of fresh varieties of the richest and brightest colours, is becoming one of the most general ornaments of our flower-gardens in autumn. It is raised from seed with the freedom of an annual, and the varieties are multiplied and perpetuated with the certainty and extensiveness of a perennial. Only two species are yet known to us, and these separated by marks, both wavering and indistinct. *Frustranea* is however, as far as we have observed, a slenderer plant than the present, with a narrower foliage, smaller flower, and a stem with a more conspicuous coating of the whitish hoar-like efflorescence, termed bloom in fruit. Both species grow to the height of seven or eight feet, with stems in proportion, and are leafy and branched throughout. The filaments of the stamens are elastic, and by extension admit of the anther being protruded above the floret by the impulse of the stigmas from within; as, charged with pollen, they advance to their station through its 5-valved membrane which opposes their outlet at the summit; withdrawing the same to its place when these have passed.

A tender out-doors plant, requiring a deep bed of rich mould for its cultivation; and that the roots should be taken up and preserved from frost and wet during the winter, in a shelter where they can be covered with dry sand or ashes. When the roots are divided, in order to multiply the plant, care should be taken to remove a portion of the rootstock, containing at least one eye or bud in the detached part.

Native of Mexico. Introduced by the way of Spain in 1789, by the late Lady Bute.

The drawing of the present showy variety, lately received from Paris, was made at the nursery of Messrs. Lee and Kennedy, Hammersmith.

a The outer and inner calyxes without florets. *b* The lower section of a floret of the ray, showing the tube and germen detached from each other. *c* A floret of the disk, with the chaff or bracte attached to the germen, showing the anther, as protruded by the style from within, before a passage is yielded to the stigmas through the valves of its summit. *d* The same after the stigmas have emerged from within the anther, and this has been withdrawn within the floret by the contraction of the elastic filaments.



Engl. Edwards. det.

Robt. J. Ridgway 170 Piccadilly. Oct. 1. 1815

Smith Sc

CAMPANULA pentagonia.

Five-angled Bell-flower.

PENTANDRIA MONOGYNIA.

CAMPANULA. (Cor. monopetala, regularis. Anth. liberæ.)
Cal. superus 5-(rarò 4-) fidus. *Cor.* campanulata (v. rotata), 5-fida.
Filamenta basi dilatata. *Stigma* (5-) 3-2-lobum. *Caps.* (5-) 3-2-locularis, sæpiùs infera foraminibus lateralibus aperiens, nunc apice supero valvato (v. foraminibus superis dehiscens).

Herbæ rarò Suffrutices, lactescentes. *Folia* alterna, nunc opposita.
Inflorescentia varia. *Flores distincti.* Brown: prod. 1:560.

Div. Capsula longissima prismatico-cylindrica, foraminibus superis dehiscens.

C. pentagonia, ramosa, diffusa; foliis inferioribus oblongis, obtusis, superioribus lanceolatis; floribus solitariis; corollis calyce longioribus.

Desfont. in annales du muséum. 11. 143. t. 18.

Campanula pentagonia. *Lin. sp. pl.* 1. 239. *Mill. dict. ed. 8. n.* 11.

Hort. Kew. ed. 2. 1. 352. *Willd. sp. pl.* 1. 914.

Prismatocarpus pentagonius. *L'Herit. sert. angl.* 3.

Campanula pentagonia flore amplissimo thracica. *Tournef. inst.* 112.

C. cretica arvensis, flore maximo. *Tournef. cor. inst.* 3.

Speculum Veneris flore amplissimo thracicum. *Raii hist.* 742.

Annua. *Caulis* sesuncialis ad pedalem, ramosus, diffusus, rotundato-angulosus, pubescens. *Folia* alterna, patentia, sessilia, angusta, uncialia et longiora, setulis nonnullis vagis albis consita, subtùs pilosa; inferiora subspathulato-oblonga, superiora lineari-oblonga vel lanceolata. *Flores* majusculi, cæruleo-purpurascens, caulis et ramorum terminales, solitarii, clausi in alas 5 complicati. *Germina* his longiora, pedunculos referentia, triquetra, pilosiuscula. *Cal.* foliaceus, stellatus, angustus, acutus, subsetuloso-ciliatus at laxè, corollà subbrevior, neque reflectendus. *Cor.* unciam profunda, rotata, plana, semiquinquefida, laciniis obovato-ellipticis, retusis, mucronatis, villis paucis mucroni circumpositis, nervo medio in dorso setulis 2-3 versùs apicem instructo. *Stamina* corollà subduplo breviora, externè pruinata: fil. membranacea, basi dilatata sertato-conniventia, ultrà tandèm recumbentia: anth. bis fermè breviores. *Stigmata* 3, post fœcundationem supra antheras replicanda. *Capsula* 2-3-uncialis, angulis costata, trilocularis, loculis polyspermis.

The CAMPANULAS, with an elongated prismatic capsule, as in the present species, have been repeatedly marked out as the stock of a new genus. They were actually formed into one by L'Heritier, in his "Sertum anglicum," by the title of PRISMATOCARPUS, and its character developed with the sagacity and precision which belonged to that excellent botanist. But in every subsequent general system or catalogue of plants, we find that all the species which composed

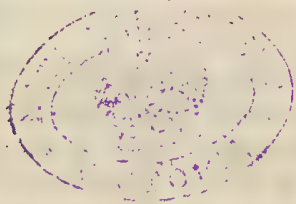
it, have returned within the pale of *CAMPANULA*; where, indeed, they sometimes occupy a distinct place, to which their former generic character is prefixed as a sectional phrase: an arrangement which we confess in this instance appears to us to be the more convenient and desirable of the two, and prevents the needless increase of new names.

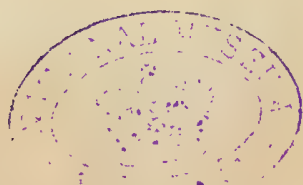
Monsieur Desfontaines has ascertained the synonyms from Tournefort, by a reference to the Herbarium of that author. He has also dropped an opinion that our plant may be a variety of *hybrida*; but gratuitously, and without suggesting a reason why he thinks so, or adducing a proof of the fact of its being so. When the corolla is closed, five flat folds are formed by the doubling of the divisions of the limb, which extend themselves in the shape of as many wings or angles, like the feathers of an arrow; a circumstance that has suggested the specific name.

A hardy annual, but not common in our collections. It requires no other care, after being sown in the spring, than that of seeing that the plants are parted by sufficient distances by thinning them out, and that weeds are kept down. Cultivated by Ray before 1686. Native of Turkey.

The drawing was taken from the extensive nursery of Messrs. Whitley, Brames, and Milne, King's Road, Parson's Green, Fulham, in July last.

a The stamens after they have parted with the pollen, showing the coronal form into which the filaments converge permanently at their dilated bases, and the manner in which they diverge beyond. *b* A separate stamen, with its valve-like dilated base. *c* The pistil. *d* The capsule, crowned by a persistent calyx and withered corolla.







Bot. Edwards del.

Art by J. Ridgway & Co. Scudell

Oct. 1. 1815.

Smith Sc

CAMPANULA aurea. α.

Broad-leaved golden Bell-flower.

PENTANDRIA MONOGYNIA.

CAMPANULA. *Suprà fol. 56.*

C. aurea, capsulis quinquelocularibus, foliis ellipticis serratis glabris, floribus subpaniculatis quinquepartitis, caulibus fruticosis carnosiss. *Hort. Kew.* 1. 223.

Campanula aurea. *Linn. suppl.* 141. *Willd. sp. pl.* 1. 912. *Hort. Kew. ed. 2.* 1. 351.

(α) *latifolia.*

Campanula aurea. *Venten. malmais.* 116.

(β) *angustifolia.*

Campanula aurea. *Jacq. hort. schænb.* 4. t. 472.

Suffruticosa, sempervirens, lactescens. Caudex pedalis & altior, teres, crassus, carnosus, nunc tumidus, cicatrizatus, divisus, in summitate foliosus. Folia firmula, sparsa, approximata, patentia, elliptico v. oblongo-lanceolata, spithamæa, duplicato-serrata, deorsum longè attenuata, decursivè petiolata, lætè virentia, glabra, lucida. Caules floriferi, annui, terminales, pyramidato-paniculati, remotè foliati, stricti, multiflori, pede breviores, crassitudine fermè pennæ olorinæ; ramuli v. pedunculi axillares, sparsi, divaricati, 1-3-flori; pedicelli 1-flori, folio diminuto bracteati, secundo-assurgentes, flore, 2-3 breviores. Flores inodori, erecti, ustulato-flavicantes, turbinato-campanulati, ultrà unciam longi. Germ. obversè pyramidatum, decemangulare, viridi-flavum, glabrum, calyce parum brevius, 5-loc.; receptacula ovulifera 5, duplicato-septiformia, angulos columellæ decurrentia, placentam duplicem secundùm marginem parietali oppositam gerentia. Cal. persistens, coriaceo-rigens, 5-partitus, campanato-connivens, laciniis ovato-lanceolatis, distantibus, subincurvis, planis, acutis intus lucidis. Cor. inclusa, pallidior, cylindrico-radiata, basi calycis imposita; infrà in brevem cylindrum connata, indè recurvata, consistentiâ & glabritie ferè calycis, sed ex duplo angustior, laciniæ lineari-lanceolatæ, cuspidatæ, foliolis calycis denuò intervenientes. Stam. corollâ bis breviora, basi sertato dilatata & inflexa. Stylus columellari-teres; stig. 5, lineari-lobiformia, acuta, dorso convexiuscula et villosa, ad basin usque radiato-replicanda, apice in spiram torquenda.

A genus familiar, by means of some species or other, to the inhabitants of every part of Europe, but in all instances within that boundary only known as a purely herbaceous plant. Towards the warmer regions beyond that boundary, others appear of the description of undershrubs, with a solid woody permanent stem; genuine Bell-flowers, however, in all other respects. Of such the island of Madeira has afforded two species now cultivated in our gardens, of which the present is one. Its stem seldom exceeds a foot in

height, is branched at top, where the flower-stems are produced, and is often irregularly and partially protuberant. The herbaceous portion of the plant is lactescent, as throughout the genus. *Leaves* substantial, of a tender lively green, glossy at the upper surface, in the broad-leaved variety sometimes nearly three inches across. *Inflorescence* a leafy upright patent stiffened pyramidal panicle; *flowers* scattered, many, but not close, of a burnt-yellow colour, firm and substantial, glossy, scentless. *Calyx*, remarkable for being of the colour of the corolla, and for the upright direction of the leaflets. This has assumed the form by which it abides long before the narrower paler *corolla* which is contained within it; and appears for some time in its centre as an oblong pointed scarcely taller cylinder, at last gradually thrown open by the elastic force of the stigmas in extending themselves after they have received the pollen of the anthers under its enclosure; the segments then fall back in the intervals of the calyx. *Stigmas* five, ultimately radiate to the base, furred at the back, where the pollen is retained in a thick coat, carried off from the anthers which have been pressed against them at that part by the narrow space of the corolla during the progress of their extension.

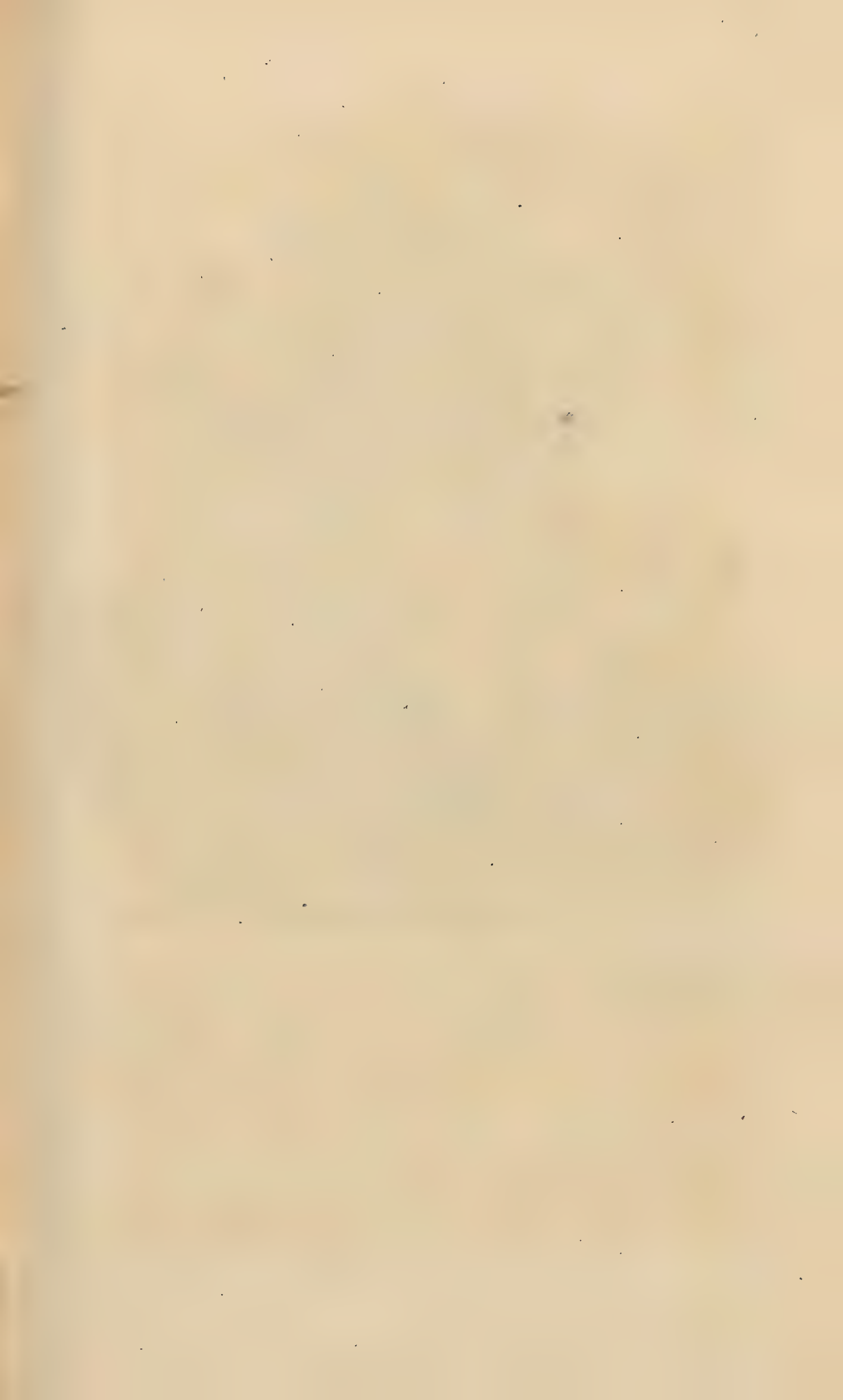
Introduced by Mr. Masson in 1777: but even at this day far from a common plant in our collections, notwithstanding its handsome bloom and easy culture. If planted in a proportionate pot of common sandy loam, and placed in the greenhouse in winter, it requires no more care than the commonest vegetable of that department of the garden. To us it has the formal appearance of an artificial plant.

Chiefly, we believe, raised from seed, which is sometimes ripened with us.

According to Mr. Masson's notes preserved in the Bankian Library, the variety α is found at Madeira on spots near the coast, β on rocks in the interior of the island.

The drawing was made from a fine specimen, with several flower-spikes, at the nursery of Messrs. Whitley, Brames, and Milne, in the King's Road, Parson's Green, Fulham.

α A vertical section of the whole flower, the line passing on one side the style. β The receptacle holding the ovula of one cell of the germen. c The dilated coronally converging bases of the filaments. d A segment of the corolla. e A leaflet of the calyx.





CALOTROPIS gigantea.
Curled-flowered Calotropis.

PENTANDRIA DIGYNIA.

Nat. ord. ASCLEPIADEÆ. Cal. 5-divisus, persistens. Cor. monopetala, hypogyna. Anth. biloculares. Pollen ad dehiscenciam antherarum coalescens in massas. Styli 2, arcuè approximati: stigma ambobus commune, dilatatum, pentagonum, angulis corpusculiferis. Folliculi 2; altero nunc abortiente: placenta suturæ intus applicata, demum libera. Semina numerosa, imbricata, pendula: albumen tenue.

Div. Asclepiadeæ veræ. Massæ Pollinis 10, læves, per paria, (diversis antheris pertinentia), affixæ stigmatibus corpusculis, sulco longitudinali, bipartilibus. Filamenta connata, extus sæpius appendiculata.

CALOTROPIS. Cor. subcampanulata, tubo angulato, angulis intus saccatis, limbo 5-partito. Corona staminea 5-phylla, foliolis carinæformibus, tubo filamentorum longitudinaliter adnatis, basi recurvâ. *Anth.* membranâ terminatæ. *Massæ pollinis* compressæ, apice attenuato affixæ, pendulæ. *Stigma* muticum. *Follic.* ventricosi, læves. *Sem.* comosa. *Frutices erecti, glabri. Folia opposita, lata. Umbellæ interpetiolares. Flores speciosi.* Brown asclep. 19, 21 & 39.

C. gigantea; corollæ laciniis reflexis involutis. Brown in Hort. Kew. ed. 2. 2. 78.

Asclepias gigantea. Lin. sp. pl. 1. 312; (exclusis Plukenetti et Alpini synonymis). Mill. dict. ed. 8. n. 18. Hort. Kew. 1. 305. Willd. sp. pl. 1. 1264.

Ericu. Rheed. mal. 2. 53. t. 31.

Ericu, americana. Seb. thes. 1. 41. t. 26. f. 1.

Madorius. Rumph. amb. auct. 24.

Frutex modò orgyalis, tomento deciduo candicans. Folia decussato-distantia, patentia, crassiuscula, fragilia, obovata acumine brevi, infra cordato-auriculata, quadriuncialia & majora, areolâ breviter barbata supra petiolum brevem crassum. Panicula sub cymoso-fastigiata, laxa, ab inter petiolos exurgens. Cal. parvus, stellatus, appressus. Cor. subuncialis, albo-purpurascens, pro $\frac{3}{4}$ divisa, disco crateroidi-depresso 5-angulari, limbo stellato-reflexo, laciniis ovato-lanceolatis, obtusulis, posticè involutis, supernè obliquatis. Organorum strues inclusa, conica, truncata, molendinata, laminis 5 parum profundis subcultrato-compressis æquidistantibus basi inflato-acuminatis & externè versùs intortis juxta apicem bicorniculatis cum suturâ villosâ in dorso tubum stamineum æquantibus atque ansularum totidem ad instar decurrentibus.

The opinions of botanists concerning the nature of the stamens in the natural family to which our plant belongs, have been long divided. Examined in the expanded flower, these organs were uniformly seen after the pollen had been

completely excreted by the anthers, had coalesced into masses definite both in number and form, and these had been taken up by appropriate processes of the pistils. Viewed thus in their final station on the stigma, these bodies were by some observers held to be the stamens of a gynandrous flower, while the remainder of the stameneous structure was left unaccounted for. By others, who combined with the view of those parts that of the natural relation of the parent-plant to the rest of the vegetable system, and drew their conclusion in part from analogy, the same bodies were surmised to be the distinct secretions of the cells of the five bilocular anthers of as many stamens of a pentandrous flower; and both their formation and station to be secondary. A supposition which has been recently reduced to certain knowledge, and the structure and economy of these parts ascertained by Mr. Brown in a series of observations made at much earlier stages of their formation than it had occurred to others to observe them in.

CALOTROPIS consists of but one species besides the present, which is a tall upright plant, sometimes acquiring the height of 6 or 8 feet, covered, unless at the corolla, by a soft white deciduous down; leafless, except towards the upper part, producing throughout a thick milk-coloured juice, which presents itself on the slightest puncture. Corolla purplish white, with five vertical prominent compressed appendages, fixed at equal distances along the outside of the stameneous tube, resembling so many diminutive porcelane handles, or brackets.

These are the nectaries of Linnæus; are partly hollow and partly solid, but contain no liquid as far as we observed; and of the share they bear beyond ornament, in the economy of the plant, nothing seems to be known.

A native of the East Indies, where it is said to grow in sandy places. Cultivated in this country from the year 1690, at which time it was in the royal garden at Hampton Court. Requires to be kept in the hothouse.

The drawing was made in July last, at the nursery of Messrs. Whitley, Brames, and Milne, King's Road, Parson's Green, Fulham.

a The calyx, detached. *b* The centre-piece of the flower. *c* The pistils, as seen when the stameneous tube has been dissected vertically, and one portion removed. *d* Two of the ten pollen-masses in their positions on one of the five faces of the stigma. *e* One of the same, detached. *f* An empty anther turned back, to show the pollen-masses that have been secreted from its opposite cells.



Lyd Edwards del.

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d. p. h.

Smith Jr

PASSIFLORA holosericea.

Velvet-leaved Passion-flower.

MONADELPHIA PENTANDRIA.

PASSIFLORA. Suprà fol. 13.

P. holosericea, foliis trilobis tomentosis: basi utrinque denticulo reflexo.*Linn. amanitat. acad.* 1. 226. t. 10. f. 15.*Passiflora holosericea.* *Lin. sp. pl.* 2. 1359. *Mill. dict. ed.* 8. n. 9.*Hort. Kew.* 3. 309. ed. 2. 4. 152. *Cavanill. diss.* 10. 459. t. 291.*Willd. sp. pl.* 3. 618. *Miss Lawr. passionjl.**Granadilla folio hastato holosericeo, petalis candicantibus: fimbriis ex purpureo et luteo variis.* *Martyn. dec.* 5. 51. t. 51.

Frutex excelsius scandens, ramosus, pubescens. Folia quadriuncialia v. circiter, alterna, distantia, mollia, cordato-triloba lobis nervo setaceo-extante aristatis extimis mancis medio ovato-oblongo acumine obtuso, tomento brevi vestita, subtus pallescentia et non longè pone sinus loborum areolâ parvâ deglubitâ glandulam fuscâ tenente (rarius aliis pluribus huic constellatim circumpositis) obsita, basi dentibus 4 vel 2 extrorsum respicientibus incisa: petiolus subsesquiuncialis glandulis binis humentibus supra basin instructus. Corymbi axillares 2-5-flori petiolos vix exsuperantes: pedicelli pedunculo fermè duplo longiores juxta infra florem articulati, laterales bracteolis tribus vagis appressis sphacelatis medii tantummodò unicâ (involucri vice?) stipati. Flos transversè subbiuncialis, rotatus. Cal. extus virens, villosus, intus corollâ concolor, basi planiusculus, subintrusus; foliola ovato-oblonga apice rotundata. Cor. tenuior, candicans; pet. foliolis paulò breviora latioraque, cum ungue brevi: corona exterior parùm brevior, erecto-patens, ex radiis numerosissimis, ordine densato circumstantibus, lineari-lanceolatis, cultrato-compressis, infra purpureis erectis, supra flavis reflexis; interior parcior, laxior, duplo brevior, erecta, ex radiis capillaceis lobo compresso truncato capitatis; intima membranacea, plicata, lacero-truncata, nectario incumbens. Receptaculum concavum, purpureo punctatum, villosum, operculo incompleto brevi crasso carnosso extus striato luteo intus tomentoso albo à margine coronæ intimæ occulto vallatum. Stipes fructificationis maculatus, germine ter longior: germ. viride, sphaericum, obsoletè 3-lobum, lanuginosum: stigmata orbiculata, pulvinata, pallidè virentia. Anth. ochroleuca.

Although the blossom of the present species does not display the splendid colours which distinguish that of the greater portion of the genus, the delicacy of its form, its abundance and long-continued succession, go far to atone this failure. The stem is climbing, clothed with a dense soft down, and attains the length of twenty feet or more, extending itself on all sides by slender numerously flowered branches. The foliage is unequally trilobate, the side lobes being little more than the sites of obliterated

lobes; both surfaces are coated with a soft velvet-like pile. The flowers diffuse a fragrance which reminds us of that which proceeds from a medley of the finer kinds of ripe fruit. The corolla and inside of the calyx are of a transparent tender white, and come very near to those of *lunata*, but are larger. The fruit we have not seen, but have heard described as small, roundish, and of a yellow colour.

Native of South America; where it was found by Dr. Houston, growing naturally at La Vera Cruz. Introduced before 1733.

A stove plant, requiring the same culture as that we have recommended for its tropical congeners in the thirteenth article of the present work.

The drawing was taken at the botanical establishment belonging to the Comtesse de Vandes, Bayswater.

a A stigma. *b* The germen. *c* A ray of the outer crown. *d* Some of the rays of the inner crown. *e* The inmost crown. *f* The nectary. *g* The incomplete operculum or cover. *h* The receptacle. *i* The stipe or column of fructification. *l* An anther.



Lyd. Edwards del.

Tab. by J. Ridgway 170. Piccadilly Oct 1. 1813.

Smith. Sc.

LOBELIA splendens.

Shining Lobelia.

PENTANDRIA MONOGYNIA.

LOBELIA. Corolla irregularis tubo hinc fisso (rard integro); limbo 5-partito. Antheræ connatæ. Stigma bilobum (nunc indivisum). Capsula bilocularis (rard 3-loc.), apice supero bivalvi.

Herbæ (v. Suffrutices) pleræque lactescentes. Folia alterna, integra v. laciniata, rard fistulosa. Flores racemosi terminales, v. axillares solitarii, pedicellis bibracteatis v. nudis. Antheræ sæpius barbata. Brown prodr. 1. 562.

L. splendens, foliis angusto-lanceolatis, denticulatis, margine planis, cauleque glaberrimis: racemo terminali. Willd. hort. berol. 86. cum tab.

Radix perennis, fibrosa, è centro exserens brevissimos stolones. Caulis 2-4 pedalis modò ramosus, sulcato-subangulatus, purpureus, glaberrimus, nitidus. Folia sessilia, 2-3 pollicaria, apice attenuata, approximata, nitida. Flores terminales, racemosi, subsecundi. Bracteæ lanceolatae, pedunculum subæquantes, denticulatae. Pedunculi calyce breviores, ut tota planta glabri. Cal. 1-phyllus, superus, 5-partitus, lac. lanceolatis acutis integerrimis, erectis, 1-nerviis, apice inflexis. Cor. coccinea, glaberrima, splendens; tubus ovato-oblongus, calyce longior, initio integer postea longitudinalitèr utroque latere fissus; limbus laciniis binis superioribus, lineari-lanceolatis, angustis, basi erectis, apice reflexo-patentibus, 3 inferioribus oblongo-lanceolatis, deflexis, planis. Stam. fil. lineari-lanceolata, margine cohærentia, apice et basi parùm sejuncta; anth. erectæ, lineari-oblongæ, cohærentes, apice pilosæ. Germ. (semiinferum), calyce obductum, 10-sulcatum: stylus filiformis: stig. bilamellatum. Caps. 3-loc., 3-valv., calyce tecta, apice dehiscens. Sem. minutissima.—Willd.

An addition to our gardens subsequent to the enumeration of the species of this genus in the late edition of the Hortus Kewensis. Native of Mexico, and raised, as well as *fulgens*, which made its appearance in Europe at the same time, from seed brought home by Messrs. Humboldt and Bonpland from their celebrated travels. Introduced from Paris about a year ago. May be known from *fulgens* at first sight, altho' closely akin, by a smooth shining surface, which in the other is clothed by a short close pubescence, imparting to it a paler opaque appearance, as if it were obscured by dust. *Splendens* is the taller-growing plant, produces offsets from the axis of the rootstock in a horizontal direction, not from the side, perpendicularly; the leaf is

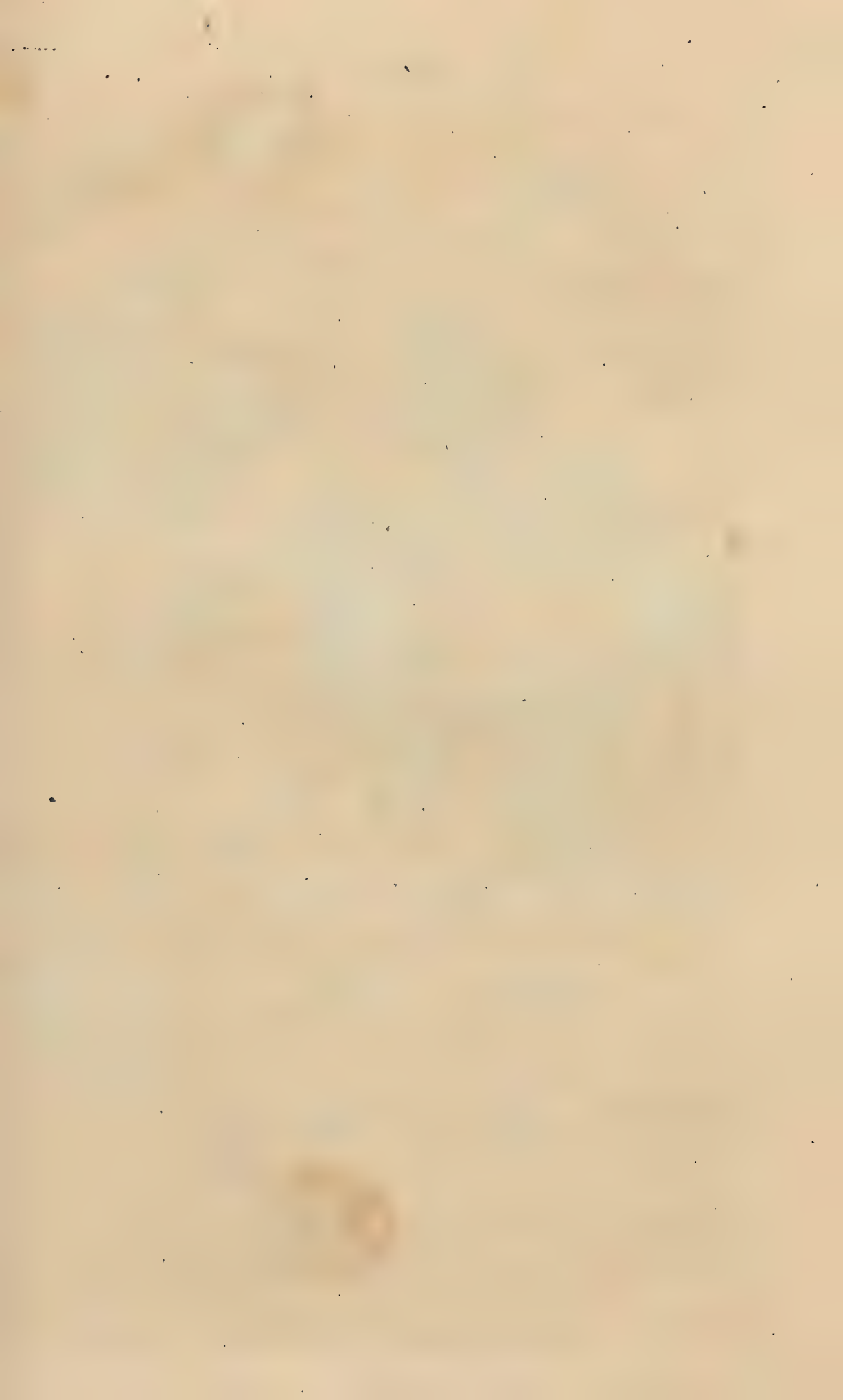
flat, and in no way revolute at the margin; and the corolla is of a still deeper and brighter poppy-colour than in the other. The long-familiar *cardinalis*, closely allied to both, has a corolla of the same form and colour, but upon a much smaller scale, an elliptic rugose decursively petioled leaf, not broad at the base, and embracing a considerable portion of the circumference of the stem, as in both its above relatives.

At present our plant is generally kept in the greenhouse; but is in fact hardy. When grown in large-sized pots filled with rich loam, and not of too loose a texture, will attain the height of four or five feet, form many branches, and continue to show a succession of bloom from July to November. Multiplied with great facility by suckers, and sometimes, we are told, by seed, which it ripens on the continent.

Miller, in the 7th edition of his Dictionary (*RAPUNTUM*. n. 2.), has a species, the description of which, as far as it goes, agrees with our plant in every thing, except in the mention of a short spike of flowers, and quite entire leaves. He says it was taller, larger flowered, and more tender than *cardinalis*, and that it came from Campeachy. We do not find it adopted or noticed elsewhere; but have some suspicion that it was of the present species, which has been since lost in our collections.

The drawing was made at the nursery of Messrs. Whitley, Brames, and Milne, King's Road, Parson's Green, Fulham.

a The stamens and pistil, detached. *b* The pistil withdrawn from the stamens.





Lyd. Edwards. del.

Pubby J. Ridgway 170 Piccadilly. Oct 1 1895.

Smith. Fr.

FRAGARIA indica.

Yellow-flowered Strawberry.

ICOSANDRIA POLYGYNIA.

FRAGARIA. (Germina plura indefinita, verè supera, receptaculo communi imposita, singula monostyla. Semina totidem nuda.) *Cal.* patens 10-fidus laciniis alternis minoribus. *Pet.* 5. *Receptaculum* seminiferum magnum, pulposum, baccatum coloratum, sæpè deciduum. *Herbæ* repentes, passim sæpè radicales; folia ternata, rarissime digitata v. simplicia; stipulæ petiolo adnatæ; flores sæpius corymbosi terminales, quidam dioici; receptaculum esculentum. Jussieu. gen. 338.

F. indica; calycis laciniis exterioribus majoribus obovatis tridentatis. *Hort. Kew. ed. 2. 3. 273.*

Fragaria indica. *Andrews's reposit. 479.*

Duchesnea fragiformis. *Smith in lin. soc. trans. 10. 373.*

Pubescens, reptans, flagellis filiformibus, rubidis, hirsutis, duriusculis. Folia in nodis solitario-distantia, ternata, foliolis rhombeo-ovalibus, inæqualiter modòque subduplicatim crenato-incisis, utrinque pube rariore sericeis, brevioribus petiolo hirsuto: stipulæ geminæ, parvæ, lanceolatæ, oppositè amplexicaules. Pedunculi axillares, solitarii, uniflori, hirsuti, stricti. Cal. saturatè virens, rotatus, pilosus, foliolis æquilongis; interioribus 5 angulato-ovalis, acutis, post anthesin conniventibus; exterioribus totidem patentissimis, obovatis, apice tricrenatis mediâ crenâ duplo latiore. Cor. calycem vix æquans, flava, rotata, decidua, petalis oblongo-obcordatis. Fructus erectus, sphaericus, saturatè coccineus, nitidus, inodorus, insipidus, seminibus crebris nitentibus concoloribus obiter receptaculo baccato adhærentibus consitus.

A species remarkable for uniting in itself the blossom of the Cinquefoil and the fruit of the Strawberry; but has no other value in the garden than that which may be put on the fine bright poppy-coloured fruit as an ornament, being on the other hand destitute of all flavour and fragrance. Native of the mountains of the continent of India, where it was seen by Dr. Buchanan on the sand by the sides of the rivers in Nepaul. We hear that there is still another yellow-flowered species with insipid scarlet fruit, which is as peculiar to the islands of India as this is to the continent, but which has not yet, we believe, reached the european gardens.

Introduced by the late Mr. Charles Greville, by whom it was cultivated at Paddington in 1804. Usually treated as a greenhouse plant; but we have seen it in a still more

flourishing state in the open ground at Messrs. Whitley, Brames', and Milne's nursery, Parson's Green.

The drawing was made from a plant kindly communicated to Mr. Edwards by Mr. N. S. Hodson, of South Lambeth.

Sir James Smith, misled by an unfaithful figure and imperfect specimen of the species, had conceived the seed to be baccate, having a covering of juicy pulp as in the Raspberry and Blackberry, instead of the dry one of the Strawberry, which really belongs to it. Combining this character with the yellow bloom and bifurmed calyx, he has been induced to make our plant the foundation of a new genus, which he has called *DUCHESNEA*, to commemorate Mons. Duchesne, the ingenious author of the illustrations of the species of *FRAGARIA*. Taking it however for granted, that the misconceived nature of the seed has been mainly relied on in framing the new genus, we consider the structure as baseless, and deserted by the framer,

^a The calyx with stamens and pistils, after the corolla has been removed.



Syl. Edwards. del.

Tab. by J. Ridgway 170. Painted by Nov 1. 1895

Smith. Jr.

IPOMŒA paniculata.

Panicled Ipomœa.

PENTANDRIA MONOGYNIA.

IPOMŒA. *Suprà fol. 9.*

I. paniculata, foliis palmatis: lobis septenis (quinis v. trinis) ovatis acutis integerrimis, pedunculis paniculatis. (*Char. ex Lin.*)

Ipomœa mauritiana. Jacq. coll. 4. 216. hort. schoenb. 2. 39. t. 200.

Convolvulus paniculatus. Lin. sp. pl. 1. 223. Willd. sp. pl. 1. 865. Hort. Kew. ed. 2. 1. 334.

Matta-pall-tiga. Hindús, ex Roxburgh in MSS.

Pal-modecca. Rheed. mal. 11. 101. t. 49.

Perennis, lactescens, tota glabra. Radix ex tuberibus congestis elongatis, teretibus, extus fuscis. Caulis (modò plures) volubilis, subbiorgyalis, teres, ramosus, calamum crassus, annuus. Folia petiolata, alterna, palmata, subquadriuncialia, 7-nervia, glabra, lobis extimis brevioribus, sinu lato brevi ad basin: petiolus folio parum brevior. Pedunculi axillares, solitarii, multiflori, longitudine ferme foliorum, erecti. Cal. subglobosus, parvus, duriusculus, chloroleucus, longitudine tubi corollæ, foliolis subrotundis, dorso altè convexis, imbricato-conniventibus. Cor. subbiuncialis, roseo-pallescens, urceolato-campanulata; tubus brevis turbinato-angustus albicans; faux 3-plo longior, multoties amplior, ventricoso- v. urceolato-cylindrica; limbus huic subæqualis, patens, laciniis retusis sinu lato brevi cum mucrone in medio. Fil. alba, inclusa, fauci æqualia, erecto-conniventia, basi barbata, 2 longiora: anth. ochroleucæ. Stigma capitato-didymum, corrugatum. Caps. 2-loc., 4-valv. Sem. lanata.

In distinguishing the characters of CONVOLVULUS and IPOMŒA, Linnæus had combined differences taken from the stigma with others from the corolla. But the differences of the one not being uniformly conjoined with those of the other, and in the corolla having no definable limit, he had been repeatedly led to refer to CONVOLVULUS plants with the stigma allotted to IPOMŒA, as in the present instance. Many similar transpositions having accumulated, from the attempts of succeeding botanists to conform in their arrangement of species to the characters so constituted, the two genera had become nearly useless in relation to each other. But Jacquin, in his late reform of their characters, has relied singly upon the difference of the stigmas; and no dislocation seems to be thence inferred in the natural connexion of the species that could have been avoided by more complex combinations, as the species are now found

to fall into their places with facility, and to range to advantage. Mr. Brown has since thought it necessary to detach from both genera a division, under the appellation of *CALYSTEGIA*, which he distinguishes by a calyx which is enclosed between two leafy bractes, and by a capsule which is unilocular.

The present plant is a native of the East Indies, where, according to Dr. Roxburgh, it grows in hedges and thickets; flowers during the wet season; and affords provender to cattle. Jacquin mentions it as native of the Isle of France. The former says the stem grows some fathoms in length, and dies down every year to the root; the latter, that in the Isle of France it winds round the trunks of trees to the height of twenty feet, and does not die down annually; altho' we see it certainly does when cultivated in our stoves. The *root* is perennial, and consists of elongated round fleshy lactescent tubers, brown on the outside. *Leaves* 3-6 inches long, palmate, 7-nerved, divided to beyond the middle into 3-5-7 lobes, the outer ones of which are smallest. The *bloom* is ornamental, and appears about July in many flowered cymose panicles, from the axils of the upper leaves. *Corolla* about 2 inches deep, bright rose-colour within the faux, paler at the limb; on the outside the colour shines thro' a white porcelane-like glaze. *Seed* woolly.

Introduced in 1799 by Mr. Thomas Gibbs. We owe the opportunity of taking the present drawing to Mr. John Hall, in whose hothouse, at Notting Hill, the plant flowered this summer in great perfection. We had never before seen it in flower; but we had found young plants of it at Messrs. Whitley, Brames, and Milne's nursery.

Propagated by parting the root. Should be kept in the tan-pit, and led along the rafters of the house, or suffered to twine round props placed for the purpose.

a The corolla dissected, to show the stamens. *b* The pistil, with didymous-capitate stigma.



J. Edwards del.

Libby J. Botany 1870. Scissidily . . .

Vol. I

1875

Smith Sc

POLIANTHES tuberosa.

Common Tuberose.

HEXANDRIA MONOGYNIA.

POLIANTHES. *Cal.* 0. *Cor.* infera, infundibuliformis, tubo erecto, limbo nutante æquali, sexpartito, patulo. *Stam.* fauci corollæ inserta: *antheræ* filamentis longiores. *Stylus* filiformi-triqueter, inclusus tubo: *stig.* 3, laminosa, obcordata. *Caps.* basi tecta calyce, 3-loc. 3-valv. polysperma: *sem.* plana, gemino ordine disposita. *Radix* tuberoso-bulbosa, folia radicalia longa, caulina squamiformia; flores spicati, seorsim aut geminatim spathacci. Jussieu, gen. 56; (mutatis nonnullis).

P. tuberosa. *Lin. sp. pl.* 1. 453. *Hort. Kew.* 1. 457. *ed.* 2. 2. 281.

Redouté liliac. 147. *Lour. cochinch.* 1. 204. *Ruiz & Pavon fl. per.*

3. 66. *Salisbury in trans. hort. soc.* 1. 41. *t.* 2. *Willd. sp. pl.* 2. 164.

Hyacinthus indicus tuberosus fl. Narcissi. *Rudb. elys.* 2. 39. *f.* 4.—fl.

Hyacinthi orientalis. id. eod. f. 2.

H. indicus major tuberosâ radice. *Park. par. t.* 113. *f.* 1.—minor, *id. eod. f.* 2.

H. indicus tuberosâ radice. *Clus. hist.* 176.

Amica nocturna. *Rumph. amb.* 5. 285. *t.* 99.

Omizochitl. *Hern. mex.* 277; cum icone.

(β) *flos plenus.* *Tuberosa.* I. *Trew. Fl. Imag. t.* 135.

Radix rhizoma teres, crassum, tunicato-bulbiceps. *Folia* plurima, radicalia, multifariam ambientia, semi-sesquipedalia, infra unciam lata, lorato-lanceolata. *Caulis* 3-4 pedalis, teres, foliosus, foliis sensim decrescentibus, sparsis. *Bractea* pari cuique florum communis duas alias unam singulo flori propriam includens. *Corolla* 2-2½ uncias longa: limbus tubo verticali striato duplo brevior, obtusus, subæqualis. *Anth.* virides, erectæ, lineares, introrsum versæ, polline luteo. *Stylus* tubo æquilongus, 3-queter, glaber, albus, crassiusculus. *Stigmata* parum divergentia.

Clusius was in possession of this plant in 1594, and is, we believe, the first writer who mentions it. The precise date of its appearance in Europe has, however, never been fixed, and the country it is natural to, is still a question. The Hortus Kewensis makes it indigenous of the East Indies; Mr. R. A. Salisbury, who has devoted an elaborate treatise to the plant, of Mexico. As far as we have searched, the latter opinion alone seems to be supported by any thing like direct evidence. No writer we have turned to even hints at an authority for its having been found wild in any part of the East Indies. The title of "indicus," constantly joined to its specific phrase by the older botanists,

with them might refer to either East or West Indies. But in the history of the plants of Mexico, compiled from observations made on the spot by Hernandez, the plant is said in precise words "to be produced in the temperate and cool districts (of Mexico), and to be a kind of Narcissus, not known in the old world." Here we can hardly avoid inferring, from the first part of the sentence, that it is meant to be recorded as indigenous; although we may be inclined to dispute the authority of a naturalist of two hundred years ago, who presumes to decide a plant's not being native of any other part of the globe than America. Father Camell, again, whose account of the vegetables found in Luzon (one of the Philippine isles) has been added by Ray to his own work, tells us unequivocally that the plant had been imported by the Spaniards from Mexico, by whom it was called *Vara de S. José*, Saint Joseph's wand, and that it was known by the name of the Mexican Asphodel. The *Flora peruviana*, on the other hand, enumerates it merely as a garden-plant in Peru; altho' that work is cited by Monsieur Redouté, as well as the learned writer of the botanical articles in Rees's Cyclopaedia, as enumerating it for one of the wild plants of that country.

The appellation it has obtained with us of "The Tuberose," evidently originates in its having been distinguished by all the older botanists from the bulbous-rooted Hyacinth, by the description of the "Hyacinth with a tuberous root," *Hyacinthus tuberosus*, or *tuberosâ radice*. The present generic name is sometimes written POLYANTHES; but since it is admitted to be compounded of *πολις* and *ανθος*, alluding to its being a favourite in towns, and not of *πολυς* and *ανθος*, we shall scarcely be thought pedantic in saying, that the spelling at the head of this article is right.

The roots are annually imported by the Italian warehousemen from Italy and Portugal, and sometimes from the warmer parts of North America. They arrive early in the spring, and if then planted, by a slight assistance from the hotbed, flower in the open air about September. The main root perishes after flowering, and is replaced by a brood of offsets, which become flower-bearers in their turn. The double variety is known to have been raised from seed by a Mons^r. de la Cour, at Leyden, about 60 or 70 years ago, Cultivated in England by Parkinson in 1629.

a A flower dissected, to show the stamens and pistil,



DIGITALIS ambigua.

Greater yellow Fox-glove.

DIDYNAMIA ANGIOSPERMIA.

DIGITALIS. *Suprà fol. 48.*

D. ambigua, calycinis foliolis lanceolatis inæqualibus, corollis pubescentibus; galea lata levitè emarginata; labii inferioris lacinia intermedia acuta, foliis ovato-lanceolatis pubescentibus. *Roth Catalecta bot. fasc. 2. 59.*

Digitalis ambigua. *Lin. suppl. 280. Syst. veg. 14. 562. Willd. sp. pl. 3. 285; (excluso synonymo Murray, dictante Roth). Hort. Kew. 2. 345. ed. 2. 4. 28. Schkuhr handb. n. 1729. t. 174. Roth neue beyr. 1. 2. 15. Id. in ann. of bot. 2. 37. Ehrhart phytoph. 62.*

D. grandiflora. *Allion. pedem. 258. Lam. & Decand. fl. franç. 3. 596.*

D. ochroleuca. *Jacq. austr. 1. 36. t. 37. Pers. syn. 2. 162.*

D. lutea. *Mattusch. sil. n. 471.—β. Leers herborn. n. 487.*

D. purpurea. *Gmel. tub. 194.*

D. foliis calycinis lanceolatis, galea incisa, faucibus maculosis. Hall. helv. n. 331.

Digitalis. Riv. monop. 104.

D. major fl. luteo amplo. Park. par. t. 881. f. 4.

D. flore luteo. Besl. eyst. æst. 1. f. 3.

Perennis. Caulis 1-2-pedalis, simplex, foliosus, subviscido-villosus, erectus. Folia sparsa, multa, nec conferta, sessilia, elliptico-lanceolata, nervosa, à prono et ad margines villosa, à supino parciùs modòque subnuda, obsoletiùs serrulata, basi utrinque deflexa. Racemus terminalis, multiflorus, laxè spicatus, secundus, foliaceo-bracteatus; bracteis pedicello longioribus. Flores cernui, villosi. Foliola calycina 3 superiora angustè lanceolata, 2 inferiora lanceolatè oblonga et duplo fermè latiora. Cor. ampla, parùm purpureæ minor, ventricosa, lutea sæpèque venis fulvo-fuscescentibus reticulata, intùs pilosa; labium superius brevissimum, rotundatum (indentatione ex Jacquino varià), inferius productiùs trilobum, lobis triangularibus, medio duplo latiore. Pistillum & stamina partim pubescentia. Capsulæ calyce duplo longiores.

Ambigua was first distinguished as a species under that appellation by Professor Murray. Yet, according to Dr. Roth, the plant which that botanist had in view was not the present, but one between it and *lutea*, nearer akin to the latter, and since named *media* by the Doctor, but adopted by Persoon in his "Synopsis," under the title of *intermedia*. Thus, should the two plants prove to be really distinct species, the name of *ambigua* will designate the one for

which it was not originally intended. In *intermedia* the stem is described as smooth; not pubescent, as in the present *ambigua*, the leaves pubescent only at the edge and base; not so over both surfaces, especially the under, the bractes smooth; not pubescent on both sides, the leaflets of the calyx equal; not conspicuously unequal, the upper lip of the corolla obtusely bifid; not broad rounded and slightly emarginate, the middle segment of the lower lip obtuse and straight; not acute, and somewhat reflex at the top. The flower of *intermedia* is also much smaller than in our plant, of a paler sulphur colour, and its calyx nearly twice as large.

Ambigua is a hardy plant, and will grow almost anywhere without care. Propagated by seed and by parting the root. Blooms in July and August. Native of the more southern parts of Europe, especially of Germany, chiefly affecting mountainous situations. No mention is made of its possessing any portion of the medicinal qualities for which the closely allied *purpurea* is famed.

The drawing was made at Mr. Knight's nursery, King's Road, Little Chelsea.

a The corolla dissected, to show the stamens. *b* The pistil.



Sylvestris del.

Libby J. Ridgway 170 Pasadena Nov 1. 1895.

Smith. H.

ERICA tumida.

Scarlet bloated-flowered Heath.

OCTANDRIA MONOGYNIA.

ERICA. Suprà fol. 6.

Div. III. Conifloræ grandes. Corollæ internè dilatata, semunciâ longiores. Dryander in Hort. Kew. ed. 2. 2. 380.

Subdiv. III. A. Antheræ aristatæ. Idem, ubi suprà.

E. tumida, pubescens; bracteis duabus subulatis calyci proximis, foliis decussato-quaternis, corollis villosis pluriès longioribus calyce.

Fruticulus strictus, undique extus villosus. Folia patentissima, decussato-quaterna, viz 2 lineas excedentia, linearia, obsolete subulata cum obtuso acumine, villis brevibus hirta, lateribus reflexis in sulcum posticum conniventibus. Flores aggregato-terminales, subquaterni, pedicello ipsis duplo v. ultra brevior, opacè sed latè coccinei, ac cerinthoidis quos plurimum æmulant. Cal. herbaceus, stellatus, ut pedicellus pilis capitatis conspersus, multoties brevior corollâ, foliolis referentibus folia caulina nonnihil dilatata: bractæ duæ contiguæ oppositæ horizontales internè versus directæ. Cor. subuncialis, ovato-cylindrica, inflata, villosa, ore constricta, lacinulis erecto-patulis, obtusis, brevissimis. Stam. libera inclusa: anth. pallido-fusca, aristatæ, aristis subulatis, serrulatis, antherâ parùm brevioribus. Stylus exsertus, coccineus, filamentis pluriès crassior, striato-teres, inclinatus, assurgens: Stigma capitatum, obsolete 4-gonum, aterrimum.

We do not find this species registered in any publication that has fallen in our way, or if it is, we have not recognised it. At a first glance our plant might be easily mistaken for a variety of the more common *ERICA cerinthoides*, with which it participates to a considerable extent in habit and colour. But in *tumida* the foliage is on a much smaller scale than in that, the inflorescence disposed by twos and fours, not in numerous crowded-flowered bunches; its corolla is also remarkably distended and of nearly three times the circumference of that of *cerinthoides*; its anthers are awned, in that awnless; the stigma inclosed in that, protruded in this. In *tumida* the corolla is about an inch long, in the other somewhat longer; in both of the finest scarlet hue, clouded by the pubescent covering of the exterior surface.

Introduced, we understand, about three or four years ago by Mr. Niven, from the Cape of Good Hope. It requires, like all the congeners from that part of the world,

to be cultivated in sandy peat-mould, and sheltered from frost in an airy light greenhouse. We have seen no specimens of it much above a foot high, and even such are as yet very rare. The drawing was taken this summer at Messrs. Colville's nursery in the King's Road, Chelsea.

a The calyx; detached. *b* A stamen, showing the anther with its serrulate awns. *c* The pistil. All more or less magnified.



FUMARIA aurea.
Golden american Fumitory.

DIADELPHIA HEXANDRIA.

FUMARIA. Suprà fol. 50.

Div. Corollis unicalcuratis.

F. aurea, caule ramoso diffuso, foliis bipinnatis, foliolis partitis lineari-lanceolatis utrinque acutis, racemis secundis, bracteis lato-lanceolatis subdenticulatis, siliquis teretibus turgidis (torosis) pedunculo duplo longioribus. (*Pursh ubi infrà, sub Corydali.*)

Corydalis aurea. Willd. enum. 740. *Pursh amer. sept. 2.* 463.

Annua. Caulis diffusè ramosus. Folia pinnata, foliolis pinnatifidis, lobis lineari-lanceolatis acutis, interdum incis. Racemus pluriflorus, simplex. Bracteæ lanceolatae, suprà denticulatae, pedicellum æquantes v. longiores. Cor. flava, semunciâ longior: calcar oblongum, obtusum, rectum, pedicellum æquans, dimidio corollæ longius: petalum infimum infra medium gibbosum, laminâ acutâ.

We learn from Mr. Pursh, that the native abode of this plant extends from Pennsylvania to Virginia, and that shady rocks are the situations it principally affects. The first mention we find of the species is in Willdenow's late enumeration of the plants cultivated in the Berlin garden. It has not found a place in the last edition of the Hortus Kewensis. From the common *FUMARIA lutea* it differs in being biennial, not perennial; in having a corolla with pointed petals, not blunt and rounded; a spur more than half the length of the flower, straight and equal to the pedicle, not deflex, and several times shorter than both pedicle and corolla; by a seed-vessel which is torose and twice as long as the pedicle, not linear, even, and shorter than the pedicle. The corolla is of a golden yellow, more than half an inch long, and has a protuberance below the middle of the undermost petal. In reality, were it not for the colour of the flower, *lutea* would not have presented itself as the point of comparison, but *sempervirens*, to which it is far nearer akin.

We have not learned the date of its introduction, but suspect that it has found its way here from the parisian gardens, where it had probably travelled from that of Berlin, in which it is known to have been raised by Willdenow

from seed, sent him from America by one of his correspondents in that country.

Tolerably hardy; but is best secured in a warm sheltered border, where it will flower about June, and ripen the seed freely.

The drawing was made at Mr. Knight's nursery, King's Road, Little Chelsea.

a The calyx. *b* The upper petal or lip. *c* The lower. *d* The two centre petals, forming the centre-piece, called its faux. *e* The stamens. *f* The pistil. *g* A silique or pod, with permanent style and stigma. *h* A detached seed.



Edw. Edwards, del.

Publ. by J. Ridgway 170. Revue de la Nov. 1. 1875.

Smith, Sc.

EPIDENDRUM fuscatum.

Brown Epidendrum.

GYNANDRIA MONANDRIA.

Sect. V. *Anthera* terminalis, mobilis, operculiformis, decidua. *Pollinis* massæ cereaceæ, læves. *Brown prod.* 330.

EPIDENDRUM. (*Cal.* 0. *Cor.* 5-petalâ, patens. *Labellum* ecalcaratum, laminâ patulâ). *Columna* cum ungue labelli longitudinalitèr connata in tubum (quandòque decurrentem ovarium). *Massæ pollinis* 4 parallelæ, septis completis persistentibus distinctæ, basi filo granulato elastico auctæ. *Brown in Hort. Kew. ed.* 2. 5. 217. *Herbæ* perennes, *parasiticæ*. *Caps.* 3-valvis: *sem.* plurima, minutissima.

E. fuscatum, caule simplici, foliis oblongis acuminatisve, pedunculo terminali elongato, spica globosa, columna petalis brevior. *Swartz in Nov. act. ups.* 6. 69.

Epidendrum fuscatum. *Smith spicil.* 21. t. 23. *Andrews's reposit.* 441. *Willd. sp. pl.* 4. 120. *Hort. Kew. ed.* 2. 5. 218.

Epidendrum anceps. *Jacq. amer.* 224. t. 138.

Epidendrum secundum. *Swartz obs.* 325; (*nec aliorum*).

Radix crassè fibrosa. *Caudex* tereti-compressus tectus vaginis foliorum, basi subbulboso-tumidus. *Folia* coriacea, alterna, disticho-patentia, vaginantia, carinata, laminâ oblongâ cum apiculo brevi obliquè reflexo, modòve sub-lanceolatâ, glabrâ, subtilitèr striatâ, saturatè viridi, subtus pallidiore v. pur-purascente. *Caulis* continuus, strictus, 1-2 pedalis, compressus, totus vaginis alternis aridis carinatis acutis striatis internodia æquantibus vestitus. *Spica* brevis, secunda, in corymbum digesta, refracta, nutans, terminalis v. ex vaginâ lateralis (in vegetiore plantâ fortè plures?). *Bractææ* solitariae, lanceolatae, germine triplo breviores. *Pet.* explanata, isometra, 3 latiora ovali-lanceolata, 2 linearia, 3-plo angustiora, modò deflexa. *Labellum* petala superans, rotundatum, trilobum, lobo medio emarginato-retusum apiculo in sinu. *Columna* brevis, inclinata apice alis binis lateralibus truncatis suprâ antheram inflexim conniventibus. *Germ.* subteres, striatum.

The above generic character allots a far narrower extent to the genus, than is admitted by that we had prefixed to *EPIDENDRUM nutans* in the seventeenth article of this work.

Fuscatum, like its congeners, is found growing on the trunks and branches of the trees, somewhat in the manner of the Mistletoe with us. It is a perennial herbaceous plant, seldom exceeding a foot and half in height, with the fibres of the root thick and fleshy; stem sheathed by the lower portions of the foliage; leaves coriaceous, distich, patent,

alternate, varying from half an inch to an inch and half in breadth, sometimes rounded with a short point at the top, sometimes lanceolate, sometimes of a silvery hue beneath and thickly covered with minute green dots, at others purplish. *Flower-stalk* long, terminal, upright, entirely clothed by alternate sphacelate deciduous sheaths, in strong plants bearing several spikes? *Spike* refracted, many-flowered, pointing one way, with the flowers disposed in the form of a corymb. *Corolla* sessile, about three parts of an inch long; *petals* of a dusky reddish brown; *lip* of a yellowish herbaceous colour, with a firmness and gloss that gives it the appearance of being formed of wax; scent very faint.

Native of the West Indies. Found by Swartz in Jamaica, on trees growing on the mountains. Introduced by Lord Gardner in 1790. Produces several flowering stems from the same root at various times of the year. Requires the treatment which we have already recommended for another species (see fol. 17) from the same regions.

The drawing was made this summer from a specimen in the hothouse at the nursery of Messrs. Lee and Kennedy, Hammersmith.

a A front view of the summit of the shaft of fructification with a portion of the lip, showing the 4 pollen-masses as they present themselves upon the removal of the anther from which they have been excreted. *b* The 4 pollen-masses extracted from the recess in the summit of the shaft. *c* The anther frontwise. *d* The converse of the same, showing its 4 partitions. All somewhat magnified.



Syl. Edwards del.

Sub by J. Bulfinch 170 Pleasantly, Nov. 1. 1845.

Smith, Sr.

PHLOX suffruticosa.

Shining-leaved Phlox.

PENTANDRIA MONOGYNIA.

PHLOX. *Cal.* 5-fidus aut 5-partitus connivens. *Cor.* hypogyna, hypocrateriformis, tubo longo, limbo plano 5-partito. *Stam.* inæqualia, non exserta, filamentis imo tubo insertis & eidem ultrà adnatis, antheris sagittatis. *Stylus* 1. *Stigma* 3-plex. *Caps.* 3-loc., 3-valv., valvis medio septiferis. *Sem.* solitaria. *Herbæ*; *folia* opposita simplicia, *floralia* interdum alterna; *flores* subcorymbosi terminales. *Habitus* Saponariæ, sed *flos* monopetalus. Jussieu. gen. 136.

P. suffruticosa, erecta, glaberrima; caule tereti maculato lævigato, foliis ovato-oblongis subcariosis suprâ nitidis atrovirentibus, subtus pallidis, corymbis fastigiatis, ramis inferioribus elongatis nudiusculis, corollæ laciniis lato-obovatis subretusis, dentibus calycinis lanceolatis mucronatis. (*Pursh*, ubi infrâ, sub *P. nitidâ*).

Phlox suffruticosa. Willd. enum. 200.

Phlox nitida. Pursh amer. sept. 2. 730. in suppl.

Caulis bipedalis et ultra, strictissimus, teres, maculatus, corymboso-ramosus, suffruticosus, sempervirens; rami summitate numerosè confertèque floriferi, cymoso-fastigiantes, ad lentem supernè subpubescentes. *Folia* distantia, longè acuminata, firma, atroviridia. *Cor.* limbo saturatè vividèque violaceo-purpurascente, stellâ centrali ex radiis 5 saturatioribus picto, laciniis lato-obcordatis, retusis, subimbricato-contiguis.

Nearly akin to *PHLOX carolina*, but in that the stem and foliage are pubescent; in this entirely smooth, except as to a very minute loose pile upon the stalks of the corymb. The flowers are here of a more brilliant violet-purple than in that, the foliage of a far darker and more shining green, and of a considerably firmer thicker substance: but the more remarkable distinction is the suffrutescent stem, which continues undecayed, and in leaf at the lower part the winter through.

Willdenow, in his account of the plants cultivated in the Berlin garden, has been the first to establish the species, and by the above name. Mr. Pursh, unacquainted with this circumstance, has inserted it in the supplement to his North American Flora by another.

Native of South Carolina. Blooms with us from the end of July to the end of October. Seldom exceeds two

feet in height. Ornamental, and succeeds in the open air if planted in a warm sheltered situation. Being yet rare, we have found it more frequently cultivated in pots, in order to be placed in the pit or frame during the winter. Propagated by parting the roots.

The drawing was made from specimens communicated by Mr. N. S. Hodson, of South Lambeth; and Messrs. Lee and Kenneday, of the Hammersmith nursery.

a The calyx. *b* A flower dissected vertically, to show the position of the stamens. *c* The pistil.



Ap. Edwards. del.

Publ. by J. Ridgway 170 Piccadilly Nov. 1. 1875.

Smith. Sc.

CROSSANDRA undulæfolia,

Waved-leaved Crossandra.

DIDYNAMIA ANGIOSPERMIA.

CROSSANDRA. Cal. 5-partitus, inæqualis. Cor. monopetala, hypogyna, staminifera, limbo unilabiato. Stam. inclusa; antheris unilocularibus. Germ. disco glanduloso basi cinctum: stylus 1: stigma 2-lobum. Caps. biloc., loculis 2-spermis, elasticè bivalvis: dissepimento contrario. Sem. retinaculis subtenusa: testa laxa: albumen nulum. *Brown prod.* 1. 472, 473, 475; et in *Hort. Kew. ed.* 2. 4. 57.

Frutex. Folia opposita, exstipulata, indivisa. Flores in spicis terminalibus et axillaribus, tribracteati.

C. undulæfolia. *Salisb. parad.* 12. *Hort. Kew. ed.* 2. 4. 54.

Harrachia speciosa. *Jacq. eclog. pl.* 33. t. 2.

Ruellia infundibuliformis. *Ann. of bot.* 2. 100. *Andrews's reposit.* 542.

Justicia infundibuliformis. *Lin. sp. pl.* 1. 21. *Vahl. symbol.* 2. 17. enumer. 1. 164. *Willd. sp. pl.* 1. 99.

Manja-Kurini. *Rheed. mal.* 9. 121. t. 62.

Frutex sesquipedalis. Truncus erectus, brevis, teres, in fine calamum anserinum crassus, cortice cinereo tectus: ramos plures emittens pedales & ultrà, virides, teretes, ad jugà foliorum nodosos. Folia opposita, decussata, lanceolato-ovata, 3 pollices longa, sesquipollicem lata, glabra, integerrima, undulata, obtusata, petiolis duplo brevioribus semiteretibus; superiora ita approximata ut hinc inde quaterna simulant. Rami axillares. Spicæ acutè tetragonæ, longè pedunculatæ. Bractæ in quolibet flore 3; exter. ovata, cuspidata, navicularis, nervosa, pubescens, pilis glandulosis minutis ciliata; interiores 2, lineares, æquilongæ. Cal. inferus, foliolis membranaceis, ovatis, cuspidatis, villosis, ciliatis, 3 exter. majoribus. Cor. hypoc crateriformis, limbo dimidiato: tubus longitudine bractearum, infernè globoso-tumidus, albidus, supernè flavescens, angustus, striatus: faux geniculo cum tubo connexa, tubulosa, angusta, supernè sulcata, extùs glabra, intùs ut et tubus villosa, in limbum ampliata latum planum, patentissimum, speciosè miniatum, unilateralem, inæqualitèr 5-lobum, laciniis profundè emarginatis, medià paulo majore. Anth. solitaria in singulis filamentis; versatiles, oblongæ, flavæ, pubescentes. Stylus filiformis longitudine tubi. Caps. lanceolata, obsoletè 4-gona, semipollicaris. Sem. orbicularia, plana, fusca, paleis obtusis undique tecta, funiculis umbilicalibus, hamiformibus, persistentibus, elasticis, dissepimento affixis, quibus mediantibus capsula tandèm dehiscit. *Jacq. fil., ubi suprà.*

It has been the fate of this plant to be removed from its original situation in JUSTICIA to be the stock of a separate genus by two botanists, so nearly at the same time, that neither seems to have been apprized of the intention of the other. Hence its late appearance under two new names.

That which we have adopted, in conformity with the Hortus Kewensis, is derived from a trivial feature in the anthers; the other is bestowed in compliment to one of the Counts Harrach, who is said to be a great encourager of Botany in Austria, where he resides. Both the botanists had, however, neglected to insert among its generic characteristics, the feature which is chiefly relied on to keep the genus asunder from RUELLIA, viz. the unilocular anthers. Indeed one of them has not even noticed it in his general description. This omission has been supplied by Mr. Brown in the character we have prefixed to the present article. In the closely kindred genus APHELANDRA, the anthers are likewise unilocular, but the corolla is bilabiate, not one-lipped, as in this.

Our shrub, we are told, has not exceeded the height of two feet in any European collection. The bark on the stem is greyish, on the branches, which are all axillary, green. The spikes terminal, numerous, imbricate, and quadrangular as in so many species of this natural order. The *corollas* about an inch and half long, of an opaque salmon-colour, more or less deep, sometimes approaching to vermillion.

Native of the East Indies. Introduced by Dr. William Roxburgh, about the year 1800: according to whom it flowers the year round in the Bengal-Gardens, and becomes a pretty large shrub.

With us a stove-plant; propagated by cuttings. When it has several branches, and the spikes terminating these are completely in bloom, it is certainly very ornamental.

The drawing was made at Messrs. Whitley, Brames, and Milne's nursery, King's Road, Parson's Green.

a A detached entire corolla, showing the globularly distended base of the tube: *b* A portion of the tube dissected, to show the enclosed stamens. *c* The pistil. *d* The outer bracte of the three that belong to each flower.



Lonicera xylosteum, det.

Col. by J. R. R. & J. P. R. 1845

Lonicera xylosteum

LONICERA japonica.

Japanese Honeysuckle.

PENTANDRIA MONOGYNIA.

Lonicera. Suprà fol. 31.Div. *Periclymenia*, caule volubili.

L. japonica, sempervirens, villosa; pedunculis solitariis, bifloris, axillaribus, racemoso-approximatis; floribus longis, ringentibus: foliis omnibus distinctis.

Lonicera japonica. Thunb. jap. 89. Syst. veg. Murr. ed. 14. 216. Willd. sp. pl. 1. 985. Andrews's reposit. 583. Hort. Kew. ed. 2. 1. 378.

Lonicera Periclymenum. Lour. cochin. 150; (nec aliorum).

Nin too; item *Sin too*, vulgò *Sui Kadsura*; et ex colore, *Kin gin qua*, i. e. auri argentique flores appellata. *Periclymenum* vulgare; s. caprifolium non perfoliatum baccis atropurpureis v. nigris. Kämpf. amœn. 785.

Frutex orgyam ultràve ascendens, ramosus, villosa-hirsutus, volubilis. Folia perennantia, subcordato-ovata, attenuata, acutiuscula, villosa, reticulato-venosa, subtilius cinerascens, 1 ad 2 uncias cum dimidio longa, $\frac{1}{2}$ ad $1\frac{1}{2}$ transversa; petioli floralium caulem vel ramulum connato-cingentes, semiteretes, semunciales magisve. Ramuli floriferi, oppositi, axillares. Flores in racemos foliosos laxè decussatos approximati, terminales: pedunculi biflori, à longioribus petiolo sensim brevissimi, in axillis foliorum diminutorum interdum in bracteis descrescentium solitarii: summi duo modò in quadriflorum coadunati. Cal. brevis, acutè 3-dentatus, arctus, cinctus bracteis 2 oppositis rotundis ciliatis: ipsis alià subulatà longiore in sensu contrario directa suffultis. Cor. ex argenteo-candicante aureo-flavesceus, sèsquiuncialis, æqualitèr tubulata, angusta, divaricato-bilabiata labio altero 3-plo latiore trifido, extus densè villosa pilisque capitatis conspersa. Stigma viride, pileato-capitatum.

A native Honeysuckle of China and Japan, where, according to Kempfer, it is known by the name of "Gold and Silver Flowers;" the corolla changing from a silvery white to a golden yellow. Its mode of growth is similar to the common Honeysuckle of our hedges; and can be nowhere seen to such advantage as planted in the border of a conservatory, where a proper support to wind its long branches upon has been provided. About the middle of summer a profusion of bloom appears, of the richest fragrance; the odour not of the kind afforded by the european species, but rather approaching that of the Orange-flower, the Tuberose, and Cape Jasmine. It is evergreen, and co-

vered throughout with a short close pubescence. All the leaves are distinct and petioled; but the *petioles* of the upper ones are in fact connate, encircling the branch, in the way of the true perfoliate leaf, usual in the upper foliage of this genus.

The species is remarkable, as partaking of the characters of both the divisions under which the rest of the genus have been commonly arranged. It has the long flower and twining stem of the *Periclymena*, with the solitary two-flowered axillary peduncles of the *Chamæcerasa*; thus undermining Jussieu's genera, XYLOSTEON and CAPRIFOLIUM, as distinguished from LONICERA, and confirming the propriety of preserving the latter so far at least entire. Figures of the plant frequently occur in chinese hangings and drawings, it being, as we are told, in great estimation in China for its beauty and fragrance.

Introduced in 1806 by the Court of Directors of the East India Company, in their ship the Hope, Capt. Pendergrass. Sent by Mr. William Kerr.

The drawing was made this summer, from a plant in the conservatory reserved for chinese plants, in the nursery of Messrs. Lee and Kennedy, Hammersmith,

Multiplied principally by layers, which take root very freely.

a The flower dissected, to show the position of the stamens. *b* The pistil.



Sol. tuberosa L.

Tab. by J. Hodgson del. & J. Smith sc.

SOLANUM amazonium.

New purple shrubby Nightshade.

PENTANDRIA MONOGYNIA.

SOLANUM. *Cal.* 1-phyllus, 4-15-dentatus lobatusve, persistens, sæpè post-efflorescentiam crescens. *Cor.* (infera) 1-petala, rotata; tubus brevis; limbus magnus, plicatus, 5-angulatus lobatusve, interdum 4-6-lobatus, patens, (modò irregularis). *Stam.* aliquandò 4-6: *fil.* subulata, minima, interdum inæqualia: *anth.* oblongæ, approximatae distantesve, sæpiùs æquales, interdum inæquales, apice poris 2 dehiscences. *Stylus* filiformis, rectus v. deflexus, in *floribus fertilibus* longior staminibus, in *fl. sterilibus* subæquans filamenta: *stigma* obtusum, subsimplex, aut 2-3-4-fidum. *Bacca* subrotunda, ovata, oblonga, glabra, apice puncto notata, 2-3-5-loc.: *placenta* carnosa, convexa, aut convexo-concava nunc à dissepimento non discreta, nunc ope laminæ intermediæ longitudinalis dissepimento utrinque ad axem affixa: *sem.* plurima, subrotunda, ovata, sæpiùs compressa, margine cincta, glabra aut minutissimè scrobiculata, pulpâ molli diaphanâ sæpissimè convoluta. *Dunal solan.* 116.

Caulis herbaceus aut frutescens, inermis aut aculeatus, aut rarò spinosus. Folia simplicia, integra, lobata, decompositaque, alterna, in plurimis geminata, rarò ternata. Pedunculi solitarii aut plures, simplices aut multifidi, axillares aut extra-axillares, oppositifolii aut sparsi aut terminales. Pedicelli SOLANI tuberosi sub flore articulati. Fructus S. esculenti magnus, sub 5-loc. Huic flos 6-9-divisus. Dunal, ubi suprâ.

Div. Aculeata.

Sub-div. Corollis 5-fidis, baccis calyce aucto & aculeato tectis.

S. amazonium, fruticosum, polygamum, tridynamum, tomentosum, sub-aculeatum: foliis oblongo-ovatis, repandis v. sinuato-lobatis; calycibus hermaphroditis solis aculeatis: flore irregulari, subinæquali.

Frutex 3-4-pedalis, erectus, pilis brevibus stipitato-stellatis densis hispidiusculis canescens. Caulis inermis, teres, flexuosus, dichotomo-ramosus. Folia remotè alterna, rariùs 2-3 approximata, petiolata, patentia, elongatè ovata, lobis lateralibus sæpè obsolescentibus nunquàm profundis obtusissimis terminali longiùs attenuato, basi sæpiùs inæqualia, à supino plerùmque flavicantia; inferiora majora in nervis & petiolis sparsim aculeata, longitudine haud rarò sesunciali. Racemi plurimi, extraaxillares, multiflori, terminales & laterales, internodiales, foliis opposito-alternantes, ebracteati, patentes, revoluti-evolvendi (ac HELIOTROPII), disticho-secundi; pedicelli 1-flori, erecti, flore breviores. Flos primarius cujusque racemi solus hermaphroditus, ceteri masculi. Cal. corollâ duplo v. magis brevior, 5-fidus, laciniis lineari-subulatis, unâ distantiore; in hermaph. cum pedicello echinatus, (fructu simul ex-crescens?); in mare inermis atque cadens cum corollâ. Cor. ampla, 2 uncias ferè transversa, sinuato-quinquesida (in masculis plurimùm profundius), violacea cum stellâ mediâ flavâ radiis externis 5 tomentosis respondente; laciniæ ovato-lanceolatae, summam mediam versùs obliquatae, infimæ 2 sublongiores divaricationes. Anth. flavæ, subsessiles, contiguae, declinatae; in maribus

inæqualissimæ, 3 imis maximis corniformibus arcuatis parallelis corollâ paulò brevioribus: in hermaph. parùm inæquales, corollâ 3-plo ferè breviores. Stylus virens, arcuato-declinatus, altitudine ferè corollæ. Flos masculus nondum expansus refert papilionaceum non apertum.

The *Solanums* have recently given occasion to a valuable monograph, in which more than 200 species are displayed: a large proportion of which has been supplied by South America. The author is Monsieur Dunal, a pupil of the celebrated Professor de Candolle. Considerable pains appear to have been bestowed on an analytical arrangement of the species, the best defence we have against an inundation of new generic names. A supplement is announced, and is to contain many more figures than are in the former part. This had been already communicated in manuscript to Monsieur Poirët, who has introduced the substance into a late volume of the supplement to Lamarck's Encyclopedia. We have not, however, been able to discover our plant in any species. It agrees in part with *tridynamum*; but the stem in that is described as herbaceous and prickly, and no mention is made of the species being polygamous, nor of any difference between the barren and the fertile calyx. In the last points our plant coincides with *polygamum*, but there again the barren flowers are not tridynamous, viz. with three anthers large, the others small.

Amazonium would have ranged under NYCTERIUM, but that genus has been reduced to SOLANUM by Monsieur Dunal. The species is shrubby, flexuose, dichotomously branched, clothed by a close short pile of stellately pencilled stipitate hairs; and has not, we believe, exceeded four feet in height with us. Racemes numerous, many-flowered, placed between the leaves, so as to be alternate with these as well as opposite to them; at first revolute, as in HELIOTROPIUM. Flowers pointing one way, nearly two inches across, of a bright violet blue, with a yellow 5-rayed star, answering to a tomentose one of as many rays on the outside: the primary one of each bunch fertile, with a calyx armed with prickles and growing with the germen of the future berry, as that grows: the others barren, and we may observe, that as no offspring is confided to their care, so no arms have been bestowed on them, and they fall when the flower falls. The corolla of both flowers is irregular, but that of the barren one more conspicuously so, the angles or segments being separated by much deeper

sinuses than in the fertile one. The longest *leaves* we have seen were about six inches long and three broad; of an elongated ovate form, and sinuately lobed with shallow rounded side-lobes, generally unequal at their base, usually beset by a few tawny subulate prickles scattered along the nerves on both surfaces, but more thickly on the petiole. The whole foliage is often tinged with a tawny yellow hue on the upper surface, but is always white beneath; its upper lobe far attenuated, but blunt.

Said to be native of Mexico. Perhaps the most ornamental species of the genus; affording a succession of bloom from the middle of summer to the beginning of winter. Requires to be kept constantly in the tan-pit of the hot-house; but not in too crowded a situation, for in such it soon loses the lower foliage and appears ragged.

Introduced by Mr. A. B. Lambert, of Boyton House, who has distributed it to others with his usual liberality.

The drawing was made at the Physic-garden, Chelsea; an establishment fast recovering its former reputation under the care of an excellent horticulturist, Mr. W. Anderson, lately appointed to the superintendence.

a The unarmed calyx of a barren flower. *b* The stamens of a barren flower. *c* The armed calyx of a fertile flower. *d* The pistil. *e* The stamens of a fertile flower.



Lysit. Edwards del.

Lithy. J. P. Harvey 170. L. A. Delley Dec 1815

Smith

TRACHELIUM cæruleum.

Blue Throatwort.

PENTANDRIA MONOGYNIA.

TRACHELIUM. *Cal.* superus, 5-fidus. *Cor.* infundibuliformis, tubo longo, limbo 5-lobo. *Filamenta* basi non dilatata. *Stylus* 1. *Stigma* globosum. *Caps.* 3-locularis (foraminibus ad basin dehiscens. *Gærtn.*) *Flores* corymbosi terminales bracteolati. *Jussieu.* gen. 165.

T. cæruleum, ramosum, erectum; foliis ovatis serratis planis. *Linn. suppl.* 143.

Trachelium cæruleum. *Lin. sp. pl.* 1. 243. *Mill. dict. ed.* 8. *Gærtn. sem.* 1. 115. *t.* 31. *f.* 4. *Hort. Kew.* 1. 226. *ed.* 2. 1. 355. *Lamarck. illustr.* 2. 73. *n.* 2599. *t.* 126. *Willd. sp. pl.* 1. 926. *Desfont. atlant.* 1. 182. *Schkuhr handb.* 1. 131. *t.* 40.

T. azureum. *Gouan hort.* 100.

Trachelio azuro umbellifero. *Pon. bald. (ital.)* 44; cum ic.

Valeriana cærulea urticæ folio. *Barr. ic.* 683, 684.

Rapunculus valerianoides cæruleus. *Moris. hist.* 2. *S.* 5. *t.* 5. *f.* 52.

Cervicaria Valerianoides cærulea. *Bauh. pin.* 95.

Biennis. *Radix* crassè fibrosa, *Caulis* sesqui-bipedalis et ultrà, teres, glaber, supernè subcorymboso-ramosus, erectus. *Folia* alterna, laxa, ovato-acuminata, inæqualitèr serrata, petiolata, 2 uncias circitèr longa, unam ferè transversa. *Flores* parvi, cærulei v. albi, numerosissimi, in cymam confertam erecto-fastigiantes, terminantes ramos. *Corollæ* tubus erectus, filiformis, gracilis; limbus patentissimus, laciniis parvis ellipticis concavis. *Fil. ore* tubi imposita, capillaria. *Stylus* exsertus, erectus. *Caps.* parva subglobosa, rotundato-trigona; sem. minutula, numerosa, elliptica, compressa, glabrata.

Grows naturally in shady places in Italy and the Levant. Found also by Monsieur Desfontaines in Barbary, where it grew in the rocky fissures of Mount Atlas. Cultivated in our gardens in 1640.

A biennial plant; seldom exceeding two feet and a half in height; *flowers* either blue or white, upright, small, produced in close numerous-flowered somewhat convex cymes at the end of the branches, which are placed at the upper part of the stem; *leaves* loosely alternate, ovate, acuminate, unequally serrate, smooth as well as the rest of the plant. In bloom from July to September. Both scientific and vernacular appellations have been suggested, by the long tube or neck of the corolla,

Propagated by seed, which should be sown in the autumn, according to Miller, soon after it is ripe. When the plants are large enough they are to be transplanted into a border, with an eastern aspect, where they may remain till the autumn following, and then be planted where they are to flower, which they will do the next summer. But the plant thrives best on old walls and ruins, where it will shed its seed and multiply without any further trouble, if there be but earth enough for it to strike root in. It endures our winter much better in such a situation than in the most sheltered border of the flower-garden.

The drawing was made from a plant sent by Mr. N. S. Hodson, of South Lambeth.

a A flower magnified, showing the germen and calyx. *b* The corolla dissected, to show the insertion of the stamens; magn. *c* The pistil; magn.



Sp. Edwards. del.

Pub. by J. Knapton & Co. London, Dec. 1. 1815

Smith. Sc.

GARDENIA radicans.

Double-flowered dwarf Gardenia.

PENTANDRIA MONOGYNIA.

GARDENIA. *Cal.* 5-dentatus aut 5- (9-) fidus laciniis interdum obliquatis. *Cor.* infundibuliformis tubo sæpè longo, limbo plano 5-9-fido. *Stam.* antheris sessilibus, intrà faucem latentibus aut parùm exsertis. *Bacca* sicca 2-4-locularis polysperma, seminibus numerosis duplici serie dispositis in singulo loculo. *Arbores aut frutices. Folia opposita. Flores subsolitarii terminales aut axillares. Genus in vivis recognoscendum. Jussieu. gen. 202.*

G. radicans, inermis, foliis lanceolatis, corollis hypocrateriformibus obtusis, calyce angulato, caule radicante. *Willd. sp. pl.* 1. 1225.

Gardenia radicans. *Thunb. diss. de Gardenia. n. 1. t. 1. f. 1. jap.* 109. *t. 20. Syst. veg. Murr. ed. 14. 251. Hort. Kew. ed. 2. 1. 368. Andrews's reposit. 491.*

Kutsjinar, altera. Kämpf. amœn. 808.

Frutex pedem parùm exsuperans, ramosus, glaber; caulis teres, crassitudine calami. Folia opposita vel sæpiùs ternia, elliptico-lanceolata, firmula, utrinque attenuata longinquius tamen versus basin, 1-2-uncialia, vix unquam tres partes uncie transversa, lucida, saturatè viridia, patentia. Stipulæ intra-foliaceæ, vaginantes, membranaceæ, ovatae. Flores ramorum terminales, erecti, solitarii. *Cal.* virens, angulatus, glaber, 5-partitus, segmentis acuminatis erectis tubo corollæ ferè duplo brevioribus. *Cor.* alba, coriacea, odoratissima, flavido-emarcescens.

The present species is only known to us as bearing flowers in a multiplied state. It is not easy to say in what respect it differs from *GARDENIA florida* (the Cape Jasmine), except in being of much inferior size. *Radicans* seldom exceeds the height of a foot, *florida* often becomes six or seven feet high; the leaf in the first is from one to two inches long, and seldom more than three parts of an inch over; in the latter nearly three times that size, of a more oblong form, and not tapered nearly so far towards the base. The disproportion between the flowers of the two is less; these in both are of the same coriaceous substance, whiteness, and delightful fragrance, and in both fade away, after nearly a fortnight's endurance, to a yellow hue. The habit ascribed to the present species, of putting out roots from the stem above ground, and which has suggested the name,

has not been observed here, except when the plant has been kept for some time in a peculiarly warm damp situation.

It is plain that this new comer will supersede the long-standing *florida*. It is propagated with the greatest facility, and by management may be made to flower nearly the year round. When a flower dies, two new branches appear by the side of its stalk, each of which, if the plant is continued in the hothouse, will soon produce a flower in its turn, and so on in succession. But *florida* is a plant of more difficult management, flowers only once in the year, and that far more shily; takes more room, and has no superiority in beauty. A cutting of *radicans*, as soon as it has taken root, will bear a flower.

The nurserymen generally keep their stock of these plants, from the autumn till about March, in the greenhouse, and then plunge them into a common hotbed; by which means they are presently brought into bloom. Plants so treated last longer, and continue more healthy, than when kept constantly in the hothouse.

Much cultivated in China, from whence it was sent by Mr. William Kerr in 1804, to the Court of Directors of the East India Company, in the Henry Addington, Captain Kirkpatrick.

The drawing was made at the nursery of Messrs. Colville, King's Road, Little Chelsea. Plants of it are now frequent in all the principal nurseries near London, being most justly in great request.





NERIUM odorum. β .*Double sweet-scented Rosebay or Oleander.*

PENTANDRIA MONOGYNIA.

NERIUM. CONTORTA. (*Cal.* 5-partitus, parvus, persistens. *Cor.* infera,) hypocrateriformis. *Faux* coronata squamis 5, divisis. Limbi laciniis inæquilateris, ecaudatis. *Fil.* medio tubo inserta. *Anth.* (conniventes) sagittatæ, aristatæ, medio stigmati cohærentes. *Germ.* 2. *Stylus* 1, filiformis, apicè dilatato. *Stigma* obtusum (orbiculo insidens. *Juss*) *Squamæ* nullæ hypogynæ denticuli in basi calycis, extra corollam. *Folliculi* erecti cylindracei, (longè acuminati. *Juss.*) *Sem.* extremitate superiori comosa. *Frutices* erecti. *Folia* terna, elongata, coriacea, venis numerosis, parallelis. Brown asclep. 71; et in Hort. Kew. ed. 2. 2. 67.

N. odorum, foliis lineari-lanceolatis ternis subtus costatis, laciniis calycinis erectis, squamis faucis multipartitis, laciniis filiformibus. *Willd.* *sp. pl.* 1. 1235.

Nerium odorum. *Hort. Kew.* 1. 297. *ed.* 2. 2. 67.

N. odoratum. *Lamarck. encyc.* 3. 436.

N. Oleander. *Lour. cochin.* 115.

N. indicum. *Mill. dict. ed.* 8. n. 2.

Nerium. β . *Hort. cliff.* 76.

N. indicum angustifolium, floribus odoratis simplicibus. *Herm. lugdb.* 447. t. 448.

Oleander sinicus. *Rumph. amb. auct. c.* 23. t. 16. f. 1.

Tsjovanna areli. *Rheed. mal.* 9. 1. t. 1.

(β) foliis latoribus, floribus plenis.

Nerium latifolium. *Mill. dict. ed.* 8. n. 3.

Nerium. γ . *Hort. cliff.* 76.

N. latifolium floribus plenis odoratis. *Herm. lugdb.* 447. t. 449.

Belutta areli. *Rheed. mal.* 9. 3. t. 2.

Arbuscula vix unquam altitudinem orgyalem excedens; faciem ex nobis quodammodò vimineam præ se ferens. Folia lineari-lanceolata, 4-6 uncialia, latitudine minùs senunciali ad uncialem: petiolus crassus, curtus. Flores terminales, bracteolati, multi, laxè cymoso-paniculati, sesquiunciales ultravè.

Linnaeus had included in *NERIUM Oleander* the present species from the East Indies, together with that of the South of Europe and the Levant. They were first separated in the former edition of the *Hortus Kewensis*, the present being distinguished by having the segments of the calyx upright, and the scales at the mouth of the tube multifariously parted and linear. Besides these marks, its foliage is gene-

rally of lighter green and less substantial, and the bloom odorous. Miller made three species of them, of which the double variety of *odorum* constituted one.

The present plant is a straight branching shrub, reminding us of the *Osier*, seldom exceeding 7-8 feet: *stem* round, bark brown: *leaves* firm narrow-lanceolate, 3-6 inches long, $\frac{3}{4}$ -1 inch broad, generally in threes: *cymes* terminal, many-flowered, loose: *corolla* much multiplied, peach-coloured, becoming redder when exposed to the open air for any time; scent resembling that of bitter almonds, or rather the peruvian *Heliotrope*, but still more powerful.

Cultivated in the Chelsea physic-garden in 1683; but had either become very rare or been entirely lost: for, on the return of an intercourse with France, plants of it brought from thence were regarded as novelties by our gardeners, and supposed to be different from those formerly in the country. But this is a mistake, the present being certainly the variety cultivated by Miller, as we have proved both by the description in his dictionary and the specimen in the Banksian Herbarium. However, this will not depreciate its worth, since there cannot be a more desirable plant for our collections.

It is known in the West Indies by the name of the South Sea Rose, and was much cultivated there for ornamental fences, till having been found noxious to the cattle that browsed it, it was confined to the garden. Both this and *Oleander* have the reputation of being poisonous.

From size well suited to the border of the conservatory; will do in the greenhouse, but we have never seen it in such perfection as in the hothouse, where it will continue to bloom till winter sets in. Multiplied by cuttings.

The drawing was made at Mr. Knight's nursery, King's Road, Little Chelsea. The plant is now in almost all the principal nurseries near London.



IPOMŒA insignis.

Bicolor-leaved Ipomœa.

PENTANDRIA MONOGYNIA.

IPOMŒA. *Suprà fol. 9.*

I. insignis, glabra, volubilis; foliis cordatis integris v. lobatis, acuminatis; cymis dichotomis; calyce brevi, obtuso, convexo: corollâ hypocrateriformi.

Ipomœa insignis. *Andrews's reposit.* 636. *Aiton's Epitome.* 369. add.

Radix perennis, tuberosa. Caulis herbaceus, teres, ramosus, 3-orgyalis vel magis. Folia 3-6 uncialia, 3-4-uncias lata, modò 3-loba, lobis parùm profundis præter terminalem, interdùm sinuato-lobata lobis pluribus irregularibus, modò indivisa, subtùs sæpiùs purpurascentia, varicosè 7-nervia, nervis omnibus principibus ab eodem puncto divergentibus: petiolus in summo dorso ubi confluit cum folio glandulâ humente utrinque notatus, ac paniculatæ, (vid. fol. 62.) Pedunculi solitarii, axillares, erecti, robusti, folio longiores, floribus pluribus multisve cymoso-terminati; pedicelli modò dichotomi, flore breviores, bracteolâ acutâ stipati. Cal. tubum brevem corollæ includens, foliolis lato-ellipticis, convexis, conniventibus, glaberrimis. Cor. roseo-pallescent, urceolato-hypocrateriformis, $1\frac{1}{2}$ unciam longa; tubus fauce 3plo angustior; faux amplius cylindræa, limbo longior; limbi laciniis brevissimis, rotundatis, emarginatis. Stam. inclusa basi barbata. Stigma capitato-didymum.

When grown in a border of mould, parted off within the tan-bed of the hothouse, our plant makes each year a fine display, attaining the length of 30 feet, with numerous branches, producing abundance of glossy pink bloom in separate large bunches. On plants that are left to grow in small garden-pots, or are yet young, the cymes seldom consist of more than five or six flowers, and these sometimes contracted nearly into the form of an umbel. But in full-grown plants, which have sufficient depth of mould, the flowers are from 15 to 20, in a broad dichotomous cyme. The species comes near to *paniculata* (see fol. 62); but the flowers of *insignis* are generally paler, smaller, and more numerous. The foliage of the two is very distinct, that of *paniculata* being always palmate, while in this it varies from entire, to three-lobed, with pointed shallow side-lobes, sometimes to 5-7-lobed, but then sinuately and irregularly so; it is also usually tinged with violet-red, or purple, beneath. In the leaf of *paniculata* the upper pair of nerves issue from the mid-rib, at a point nearly half an inch above that at which the two lower pair

are produced; but in *insignis* all these spring from one point at the base. The *petioles* in both have a small gland placed on each side the convex back, at the point where they enter the leaf, from which drops of a clear liquid are seen to distil. The roots of both are tuberous; the stems annual.

Among Dr. Roxburgh's unpublished drawings of Coromandel plants in the library of Sir Joseph Banks, we found one of a plant under the name of *CONVOLVULUS fastigiatus*, which we have little doubt is the present species. We could not find, however, any description or account of it. In the drawing the seeds do not appear to be pubescent, as is the case in *paniculata*.

Unless this should be our plant, its native country does not seem to be determined. Multiplied by cuttings with facility.

To display it in perfection, an extensive trellis and rather lofty hothouse are required.

The drawing was made at Messrs. Lee and Kennedy's nursery, Hammersmith, in October last.

Introduced in 1806 by Mr. Benyon, of Englefield House, Berkshire.

a A section of the lower part of the corolla, to show the insertion of the filaments. *b* The pistil.



ASCLEPIAS tuberosa. α.

Tuberous Swallow-wort, or Orange Apocynum.

PENTANDRIA DIGYNIA.

Nat. Ord. ASCLEPIADEÆ. Cal. 5-divisus, persistens. Cor. monopetala, hypogyna, regularis, decidua. Stam. epipetala, laciniis limbi alternantia. Anth. biloculares. Pollen ad dehiscentiam antherarum coalescens, in massas numero loculorum. Germ. 2. Styli 2, arcuè approximati. Stigma ambobus commune, dilatatum, pentagonum, angulis corpusculiferis. Folliculi 2, altero nunc abortiente. Placenta suturæ intus applicita, demùm libera. Sem. numerosa, imbricata, pendula. Albumen tenue.

Div. ASCLEPIADEÆ VERÆ. Massæ Pollinis 10, læves, per paria (diversis antheris pertinentia), affixæ stigmatis corpusculis, sulco longitudinali bipartilibus. Fil. connata, extus sæpiùs appendiculata.

ASCLEPIAS. Cor. 5-partita, reflexa. Corona staminea simplex, 5-phylla: foliolis cucullatis, è fundo exserentibus processum aversum corniformem. Massæ Pollinis compressæ, apice attenuato affixæ, pendulæ. Stigma depressum, muticum. Folliculi læves. Sem. comosa. Herbæ erectæ. Folia opposita, nunc alterna! v. verticillata. Umbellæ interpetiolares. Brown asclep. 19, 21, 36; et in Hort. Kew. ed. 2. 2. 80.

A. tuberosa, caule erectiusculo summitate divaricato-ramoso hirsutissimo, foliis sparsis oblongo-lanceolatis, umbellis subcorymboso-terminalibus. *Pursh amer. sept.* 1. 183.

Asclepias tuberosa. *Lin. sp. pl.* 1. 316. *Mill. dict. ed.* 8. n. 11. *Hort. Kew.* 1. 309. ed. 2. 2. 82. *Michaux bor. amer.* 1. 117. *Willd. sp. pl.* 1. 1273.

Apocynum novæ angliæ hirsutum, tuberosâ radice, floribus aurantiis. *Herm. lugdb.* 646. t. 647. *Dill. elth.* 35. t. 30. f. 34.

(β) caule decumbente foliis sublinearibus hirsutissimis umbellis lateralibus. *Pursh ubi supra* 184.

Asclepias decumbens. *Lin. sp. pl.* 1. 314. *Mill. dict. ed.* 8. n. 10. *Walt. carol.* 106. *Willd. sp. pl.* 1. 1268.

A. hirsuta foliis ovatis obtusis subsessilibus, caule decumbente. *Gron. virg.* 27. ed. 2. 37.

Apocynum carolinianum aurantiacum pilosum. *Petiv. sicc.* 90.

Hirsutiùs pubescens, præter corollam. Radix perennis, elongato-tuberosa, crassa, modò profundissima. Caulis sesqui-bipedalis, decumbens vel erectiusculus, divaricato-ramosus. Umbellæ in ramis fusco-rubentibus plures, corymboso-fastigiatae, multiradiatae, in pedunculis communibus secundo-lateralibus & terminalibus, singulis inter folia bina opposita sitis, biuncialibus ad ferè obsoletos: pedicelli 1-flori, flore subtriplo longiores. Folia suprà pro majore vel minore spatio opposita, deindè sparsa; inferiora elongato-oblonga acumine ferè obsoleto, basi minimum attenuata, v. subcordata; petioli breves. Flores aurantiaco-crecati, vix quartam uncie partem excedentes. Cal. corollâ 3-pla brevior, foliola lanceolata. Corona stam. obtusa, corollæ laciniis æquans.

A plant very generally native in most of the states of America, where it goes by several denominations; such as "Butterfly-weed," from being a favourite resort of the insects of that tribe; "Pleurisy or Ache-in-the-side plant," from its medicinal virtues, said to be of considerable activity; besides some others.

The stem varies in its direction, being sometimes decumbent, sometimes nearly upright, and unites in itself, in a greater or less degree, both the opposite and alternate habit of foliage; circumstances not ascertained by its first historians, and which have caused the separation of the two varieties into as many species. A greater or less proportion of the upper leaves are always opposite, the rest scattered.

Mr. Pursh mentioned to us, that he had found it growing on mounds of sand which had been gradually accumulated by the wind to a considerable height, having a root which descended to near two fathom in depth: that in such situations the stem was decumbent; in sheltered fertile ones generally upright. The leaves vary from three inches long and nearly one broad, to very narrow; from oblong, to lanceolately attenuate, and to linear. The stem from one to two feet high, or more.

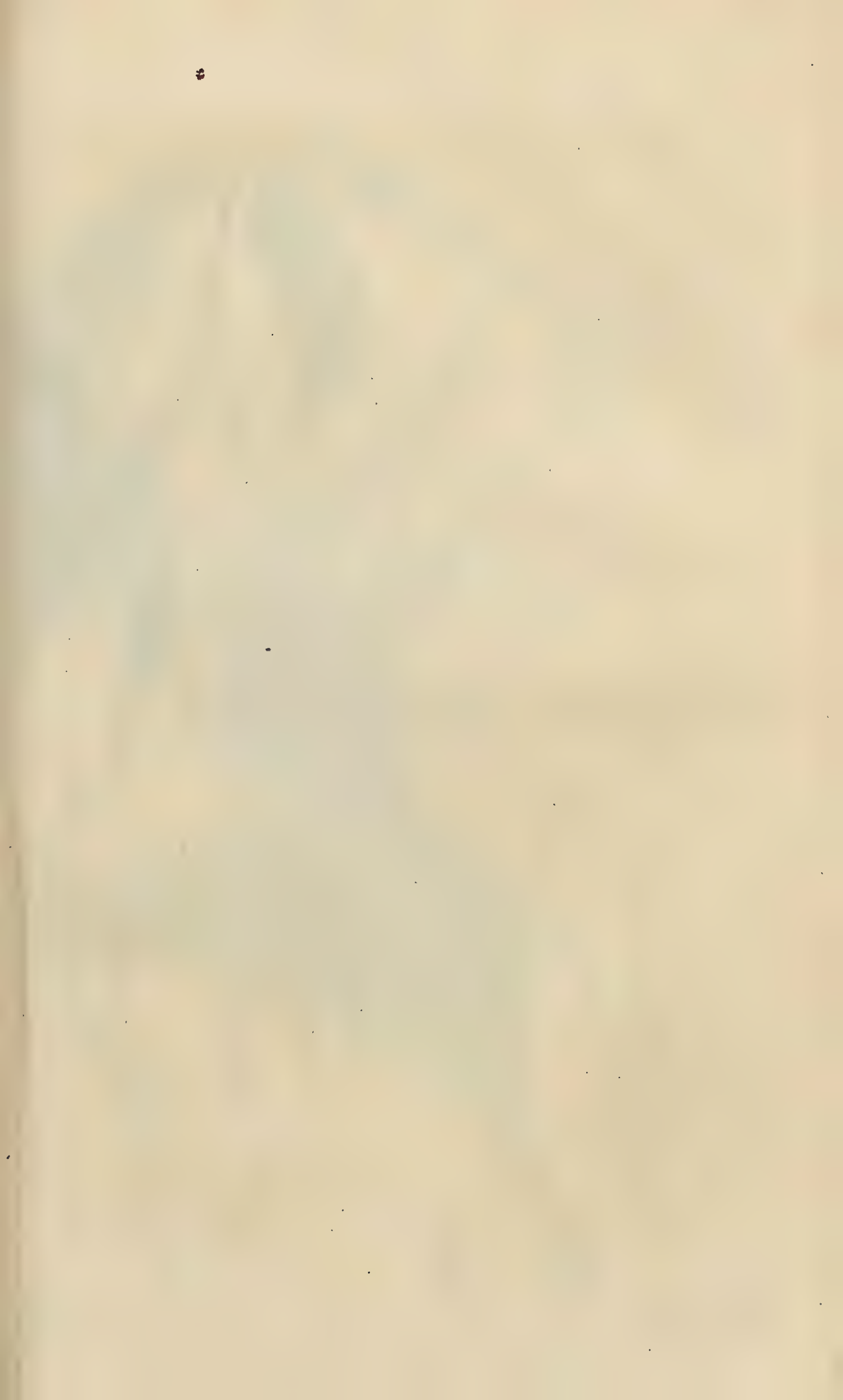
The name of "Swallow-wort" takes its rise with the european officinal species (*Asclepias Vincetoxicum*); and seems to be a version of *Hirundinaria*, the denomination that plant appears under in most of the works of the old botanists; to whom the name was suggested by a visionary assimilation of the fruit-vessel with its plumed seed, to a Swallow on the wing.

Generally raised from imported seed. Requires to be placed in a warm, dry, sheltered border of light mould. When its tuberous root has become large, it does not bear transplanting well. Sometimes seeds with us.

Cultivated in 1690 in the garden at Hampton Court. Blooms from July to September.

The drawing was made at Messrs. Colville's nursery, King's Road, Little Chelsea.

a The calyx. *b* The stameneous tube surmounted by the stigma, the crown being removed. *c* A leaflet of the stameneous crown, with its horn-shaped process.





Lyt. calaverita del.

Pl. by J. Wislizenus 1840. Bot. Ill. Jan 1. 1840



GLORIOSA superba.

Superb Gloriosa.

HEXANDRIA MONOGYNIA.

GLORIOSA. Cor. infera, 6-partita, æqualis, regularis, laciniis undulatis, longissimis, reflexis. Stum. imis laciniis inserta, stylo (obliquo) breviora. Caps. ovalis, 3-loc., 3-valv., polysperma; sem. in gemino ordine disposita in singulo loculo, globosa. Caulis herbaceus, scandens, ramosus; folia apice cirrhosa; pedunculi 1-flori, axillares et terminales; radix tuberosa. Jussieu. gen. 48; sub METHONICA.

G. superba, foliis cirrhiferis. *Lin. sp. pl.* 1. 437.

Gloriosa superba. *Mill. dict. ed. 8. n. 1. Hort. Kew.* 1. 434. *ed. 2.* 2. 247. *Gærtn. sem.* 1. 69. *t. 18. f. 1. Willd. sp. pl.* 2. 95. *I. G.*

Müller sp. pl. Schneevogt ic. 35. *Andrews's reposit.* 129.

Methonica superba. *Desfont. ann. du Muséum.* 1. 127. *Redouté lilac.* 26.

Methonica malabarorum. *Herm. lugdb.* 688. *t. 689. Pluk. alm.* 249. *Phyt. t.* 116. *f. 3.*

Lilium zeylanicum superbum. *Comm. hort.* 1. 69. *t. 35. Rudb. elys.* 2. 178. *f. 7.*

Mendonii. *Rheed. mal.* 7. 107. *t. 57.*

Radix perennis, fragili-carnosa, compresso-elongata, gnomonicè curvata, cruribus demissis, digitum circitèr crassa, promens gemmam è summâ flexurâ. Caulis herbaceus, orgyalis et ultrâ, teres crassitudine calami scriptorii, glaber, foliosus, debilis, ope foliorum apice cirrhato-prehensilium sustentandus; ramosus ramis simplicibus, 2 oppositis, 3-4ve verticillatis. Folia sparsa, distantia, ovato-lanceolata, longius caudato-acuminata, cirrho spirali præfixa. Pedunculi solitarii, axillares, 1-flori. Flores 2-3-unciales, cernui, denud miniato-coccinei. Corollæ lacinie elongato-lanceolatæ, de prope basin totæ reflexo-arrectæ, undulatæ. Fil. subulato-elongata, erecto-patentia, laciniis quarum basi inserta breviora; anth. vibratiles. Germ. oblongum. Stylus horizontalitèr assurgens, ad basin defracto-obliquatus et angulum rectum cum germine efficiens, virens, striatus: stig. 3, gracilia, patula.

The extravagance of the present generic name, its being accompanied by a specific one little less exaggerated, its being an adjective, and more worthy of the whim of a dutch florist than of the taste of Linnæus, have provoked several attempts to get rid of it for that of METHONICA, an appellation the plant is known by in Malabar. But we see no defect in any name by which a genus is generally and rightly known, of which the inconvenience can ever equal that infallibly caused by the change of it;

and prefer the well known denomination to that less known, altho' of better taste.

The plant is singular as well as beautiful. The scarlet undulate retroverted ascending segments of the *corolla*, are likened by Linnæus to so many flames; the *style* points horizontally, and appears as if broken at the base and fallen on its side; the *root* is a fleshy brittle elongated somewhat flattened tuber, bent downwards on each side from the middle into a kind of arch, from the upper part of the centre of which the stem rises; in old plants a catenation of these forms a structure of very singular appearance. Monsieur Desfontaines recommends the taking up of these when the stem decays, and laying them by in the hothouse, before they are replanted in the spring. The *stem* is from six to ten feet high, weak and supported by the hold that the leaves take of the neighbouring plants, by means of a spiral *tendril* growing from their point. The *corolla* varies from two to three inches in depth. The plant has the reputation of being poisonous. Its place in the natural system is among the *Lilia*, near to *ERYTHRONIUM* and *UVULARIA*.

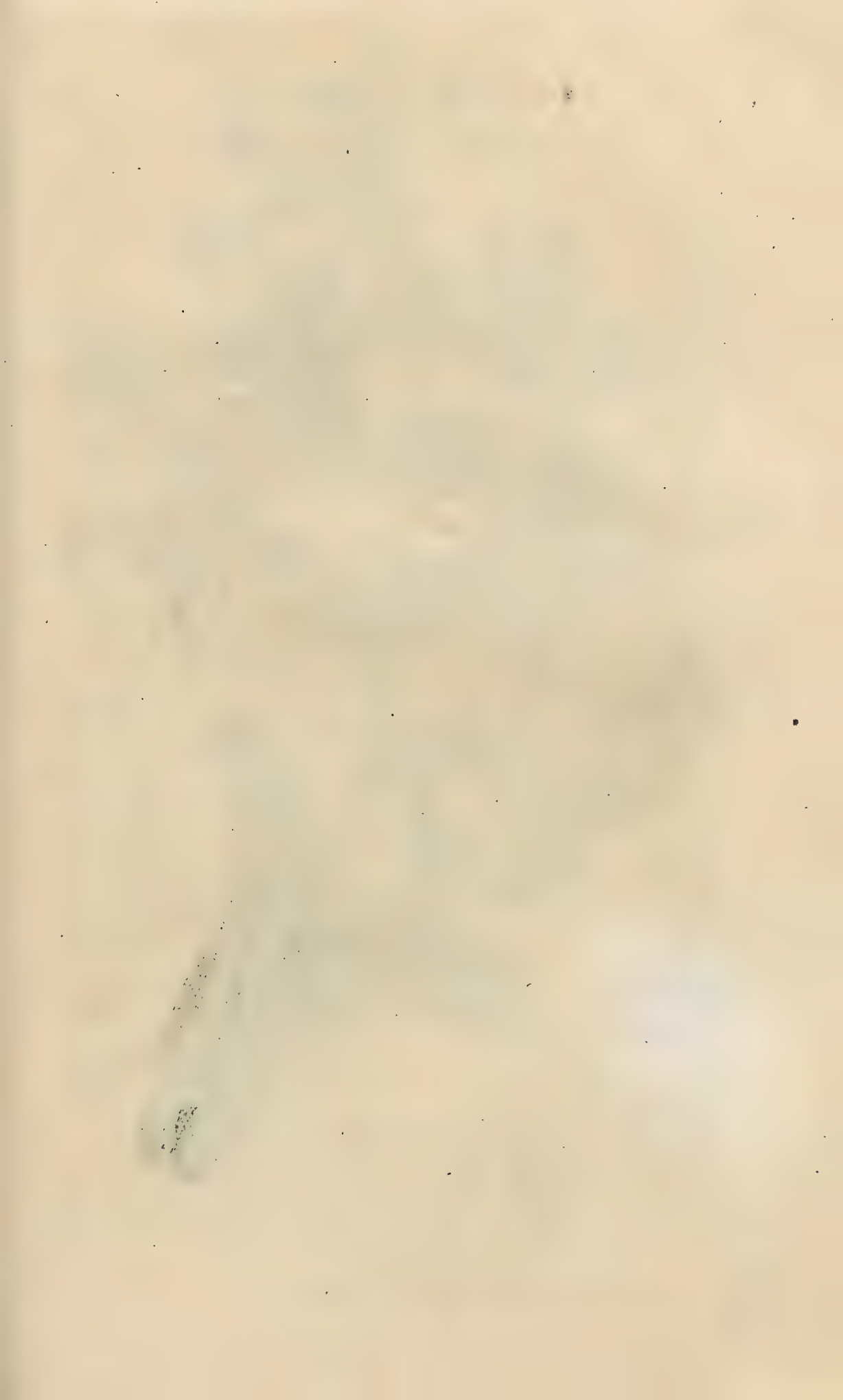
Native of the East Indies. Introduced by Mr. Bentinck, afterwards Lord Portland, in 1690. We suspect the plant from Guinea is a distinct species.

Requires to be kept, while growing, constantly in the tan-pit of the hothouse, where it flowers late in the summer.

Multiplied by parting the tubers.

The drawing was made from a plant which flowered this autumn in Mr. Vere's collection at Kensington Gore.

a A segment of the corolla, with a stamen attached. *b* The pistil, after the corolla is removed.





PASSIFLORA perfoliata.

Perfoliate Passionflower.

MONADELPHIA PENTANDRIA.

PASSIFLORA. *Suprà fol.* 13.

P. perfoliata, foliis cordatis bilobis obtusis mucronatis, summis sub-amplexicaulibus, petiolis eglandulosis, calyce campanulato, petalis calycis laciniis duplo longioribus. *Willd. sp. pl.* 3. 611; (*excl. Syn. Mill. Dict.*)

Passiflora perfoliata. *Lin. sp. pl.* 2. 1356. *Amæn. acad.* 1. 222. *t.* 10. *f.* 8. *Swartz obs.* 334. *Jacq. hort. schænb.* 2. 28. *t.* 182. *Willd. sp. pl.* 3. 611. *Andrews's reposit.* 547. *Miss Lawr. passionfl. Hort. Kew. ed.* 2. 4. 149.

P. normalis. *Willd. phytog.* 1. 9.

P. foliis trilobis: cruribus oblongis obtusis: intermedio fere obsoleto setulâ terminato. *Brownè jam.* 328.

Flos passionis perfoliatus s. periclymeni perfoliati folio. *Sloane jam.* 1. 230. *t.* 142. *f.* 3. 4.

Caules ramosi, supernè angulati, villosi. Folia alterna, subtriloba, brevia, latissima, transversim oblongata, basi cordata, trinervia, subtus venosa, glauca, punctis annularibus puncticulum elevatum cingentibus passim notata; lobi laterales simul rati circa 2 uncias transversi, ovato-oblongi, divaricati; intermedius brevissimus obsolescens, erectus, omnes obtusissimi et setulâ minutâ terminati. Lobi ambo sinûs postici in summis foliis sic connivent ut hæcce mentiantur perfoliata. Petioli villosi, sinû foliaceo breviores assurgentes, sine glandulis. Stipulæ parvæ, subulatæ. Pedunculi axillares, 1-flori, villosi, folio transverso breviores, solitarii geminive, bracteolis setaceis (3?) pro involucrio. Cirrhi longissimi. Flores subsesquiunciales, punicei, erecti. Cal. 5-fidus, fere pro dimidio cupulatum tubulosus, segmentis stellato-patentibus, subulato-linearibus, coloratis. Corollæ petala summo tubo calycis imposita, ejusque segmentis subduplo longiora, oblongo-lanceolata, plana, acuta, erecto-patula, a nascentiâ aperta, quod insolitum. Corona duplex; exterior divisa corollæ basi imposita triploque brevior, arcuè connivens, virens, margine coccinea, radii non numerosi, carnosuli, rigidiusculi, obtusi, sæpè per alterna paria concreti; interior (v. operculum) membranacea, arida, decolor, lacero-partita, deflexa versùs fundum tubi calycini. Septum nectarii parietem tubi parùm supra basin columnæ circinans. Columna exserta: stipes teres, gracilis, corollam fere æquans, glaber, germine pluriès longior: anth. lineari-oblongæ, verticali-versatiles, virides. Germ. glabrum: stig. obliquè capitata, bilobo-emarginata, virentia.

The flower of this species has several features which distinguish it strongly from that of the others of the genus in this work; it is open from the time of its appearance in the bud-state; the disk of the calyx rises into a cupular tube for nearly half the length; the petals are longer and

broader than the segments of the calyx, and are placed on the inner rim of its tube; the rays of the *outer crown* converge cylindrically round the column; the *inmost* or *operculum* is deflected along the side of the tube towards the bottom down to the *dissepiment*, that forms a circle on the inner wall a little above the base of the *column*, which has a slender stipe that elevates the parts it supports beyond the corolla. The species differs from *P. Murucuja* chiefly in having the crown parted into linear stripes, and not of one connected piece. The *upper leaves* are remarkable for encircling the branches which bear them by the lobes that form the sinus or indentation at the base, and thus assuming the perfoliate mien of the upper foliage of certain sorts of Honeysuckle. The stem we believe seldom exceeds the length of ten feet, is villous above, as are the peduncles, petioles, and even the leaves along the nerves at their under surface, where they are likewise glaucous and veined.

Native of the West Indies. Found by Dr. Swartz growing in hedges on parched spots near the sea, on the southern side of Jamaica; by Sloane on the wooded rocky mountains of the same island,

Introduced by Mr. William Fordyce in 1806.

Requires the treatment we have recommended in the fourteenth article of this work for the tropical portion of the genus.

The drawing was made this summer from a plant which flowered in Lord Tankerville's collection at Walton-upon-Thames.

a One of the petals. *b* A segment of the upper portion of the calyx. *c* The dissepiment of the nectary. *d* The inmost crown or deflected operculum. *e* The outer crown. *f* The column; which is a stipe or stalk coated by the 5 united filaments to where these divide, bearing the pistil on its summit. *g* A stamen. *h* The germen. *i* A style. *k* The calyx without the corolla.



Fig. 1. Schreb. del.

Pl. by J. Walpurg (1790) Succubula Linn. 1753

d. c. b. n.

Smith. Sc.

PASSIFLORA lutea.

Yellow Passionflower.

MONADELPHIA PENTANDRIA.

PASSIFLORA. Suprà fol. 13.

P. lutea, foliis cordatis trilobis obtusis glabris, petiolis eglandulosis, pedunculis axillaribus geminis, petalis calyce duplo angustioribus. Willd. *sp. pl.* 3. 615.

Passiflora lutea. Lin. *sp. pl.* 2. 1358. *Amœn. acad.* 1. 224. t. 10. f. 13. *Mill. dict. ed.* 8. n. 3. *Cav. diss.* 10. 444. t. 267. *Jacq. ic. rar.* 3. t. 607. *Coll.* 2. 282. *Michaux bor. amer.* 2. 37. *Pursh amer. sept.* 2. 444. *Hort. Kew.* 3. 308. ed. 2. 4. 151.

P. foliis trilobis cordatis æqualibus obtusis glabris integerrimis. Gron. *virg. ed.* 2. 140.

Clematis passionalis triphyllus, flore luteo. Moris. *hist.* 1. 7. sect. 1. t. 2. f. 3.

Flos passionis minor, folio in tres lacinias non serratas minùs profundas diviso. Sloane *jam.* 1. 231.

Herbacea. Radix perennis, repens; caules plurimi, annui, ramosi, cirrhis diffusè scandentes, teretes, graciles, vix pedes 4 excedentes, supernè striati, uti pedunculi petioli & folia juniora subtùs pilis minutis laxis mollibus villosi. Folia valdè oblatè cordata, transversim latiora, venosa, 3-nervia, truncato-triloba, lobis latis brevibus obtusiùs acuminatis v. rotundatis setulà brevì in apice, medio productiore, lateralibus divaricatis obsolescentibus: petioli eglandulosi, producti: stipulæ exiles. Pedunculi axillares, capillacei, 1-flori, sæpiùs gemini, petiolo longiores, erecto-patentes, paulò infra calycem articulati. Cirrhi his laterales et intermedii. Flores erecti herbaceo-flavescentes. Invol. aut Bracteæ 0? Cal. extùs herbaceus, villosiusculus, basi intrusus, stellatus, foliolis lineari-oblongis, obtusulis, dorso trisulcis. Cor. pet. albicantia fermè triplo minora, tenera, lanceolato-linearia, explanata. Corona lutea, triplex; exterior æquans calycem, patentissima, ex radiis numerosis filiformibus; interior triplo brevior, simplex, erecta, ex radiis plurimis gracili-clavatis; intima (si mavis operculum) membranacea, plicata, incumbens nectario. Septum annulus carnosus in fundo floris prominulus distinguens receptaculum columnæ à nectario. Fil. supernè ligulæ membranaceæ divergentes: anth. lineari-oblongæ, flavæ. Germ. viride, glabrum, elliptico-trigonum: styli saturatè virides. Bacca v. Pepo rotunda, vix piso major.

The present species, and the *quadrangularis* already given in the fourteenth article of this work, are, we suspect, exemplifications of nearly the extremes of size in the flower of this genus. Probably likewise of the fruit, which in the one is of the size of a pea, in the other larger than a swan's egg.

In the natural system *PASSIFLORA* was first assorted with the *Capparides*, or vegetables allied to the Caper-plant; afterwards more correctly with the *Cucurbitaceæ* or Gourd-tribe. From these, however, it has been since detached by the present luminary of the science, Professor de Jussieu, and forms the foundation of a separate natural order to which it gives the name. The order is distinguished from that of the *Cucurbitaceæ*, by being furnished with stipules, by having stamens and pistil in the same flower, by a germen detached from the calyx and corolla, by stamens concrete with the stipe or stalk of the fruit, by anthers of a quite different conformation, distinct from each other, and fixed to their filament at the middle. In the artificial system, the genus had fluctuated between *Gynandria* and *Pentandria*, but is now correctly fixed by Cavanilles in *Monadelphica*; the filaments being connate, and also below the germen, not upon it, as in a gynandrous flower.

The fruit is a *berry* of the sort specified by the term *pepo*, of which we know no closer equivalent than *gourd*. In the West Indies it is called by the spanish name of *Granadilla*, from being full of seed, as in the *Granata* or Pomegranate.

The species is native of Jamaica, Virginia, Carolina, and Florida. Will endure our common winters planted at the foot of a warm wall. The *root* is perennial and creeping. The *stem* herbaceous, diffusely branched, climbing by tendrils, seldom exceeding four feet. The *foliage* varies much in size, and when young has a minute soft pubescence on the under surface, as well as the petiole, peduncle, and branches. The *flowers* are generally in pairs, and appear about August.

In the article *PASSIFLORA holosericea* (fol. 59), we have in two places termed the *dissepiment* or partition between the receptacle of the column and the nectary, by mistake, "the incomplete *operculum* or cover." By *operculum* the inmost membranous crown, a sort of ruffle that lies over the nectary, is meant.

The plant was introduced by Catesby in 1714.

The drawing was made from a specimen with which Mr. Edwards was favoured by Lady Aylesford, from her collection at Stanmore.

a Outer crown. *b* Inner crown. *c* Inmost crown or cover. *d* The dissepiment of the nectary. *e* An anther. *f* One of the styles.



Lyd. Edwards, del.

Publ. by J. Rodgers 170 Piccadilly Jan 1. 1816.

Smith B.

EPIDENDRUM umbellatum.

Umbel'd Epidendrum.

GYNANDRIA MONANDRIA.

EPIDENDRUM. *Suprà* fols. 17, 67.

E. umbellatum, caule simplici, foliis oblongis subemarginatis, floribus in sinu folii terminalis confertis, lamina labelli triloba, lobo intermedio emarginato. *Swartz in Nov. act. ups.* 6. 68.

Epidendrum umbellatum. *Swartz prod.* 121. *Fl. ind. occid.* 3. 1501. *Willd. sp. pl.* 4. 117. *Hort. Kew. ed.* 2. 5. 218.

E. difforme. *Jacq. amer.* 223. t. 136.

Radices simplices, repentes, rigidaë, albidæ. Caules (nunc unicus) aggregati, semipedales, simplices, compressiusculi subflexuosi, foliosi, glabri. Folia alterna, ovato-oblonga, basi vaginantia, obliqua, patula, subinde recurvata, integra, apice parum emarginata, avenia, glaberrima, crassiuscula: vaginæ arctæ, apice apertæ, compressiusculæ, margine ancipites, (hinc folia subtus basi carinata,) striatæ. Flores (sesquiunciam excedentes) è sinu folii terminales, aggregati, brevissimè pedunculati, (plures) numerosi, majusculi, (viridi-lutescentes;) vaginæ (bractæ) spathæformes, plures ad basin pedunculorum, oblongæ, acutæ, pallidæ (involucelli instar.) *Swartz.* Petala isometra, lanceolata, patula, striata, 2 interiora plurimum angustiora linearia. Labellum petala subexsuperans; lamina deflexa (flos enim torsione germinis resupinatus), transversim latior, oblato-subcordata, triloba, venosa, costula rectâ transeunte medium de fauce, cujus orificio astant glandulæ 2 elevatae virentes; lobi laterales rotundati, posticè secundum utrumque latus columnæ profundius deflexi, medius multò minor bifidus lobulis obtusatis planis. Columna fermè duplo brevior corollæ; alæ laterales marginis paulò ultra antheram productæ v. obsolescentes. Germen petalis plus duplo longius. Anthera fusca, loculis 4 parallelo-convergentibus: Massæ pollinis globosæ, pallidæ luteæ, appendicibus filiformibus brevibus alterâ fine connexæ.

A species which is very rarely met with in our collections, and remarkable in the genus for an aggregated sessile inflorescence, issuing from the bosom of the uppermost leaf on the stem, separated at the base by small enclosed spathaceous bractes, and standing upon very short nearly obsolete pedicles.

Flowers several, an inch and half long, upright, of a green-yellow colour. Stem simple, little more than half a foot high, sheathed the whole length by the lower attenuated portion of the leaves; these alternate, distich, patent, oblong, substantial, firm, smooth. A native of the West Indies, where it grows on the trunks of trees, sometimes horizontally, sometimes perpendicularly downwards. In-

troduced in 1793 by Rear-admiral William Bligh, in the Providence.

Professor Jacquin having described in the specific phrase to *difforme* the *column* of the flower as equal to the corolla, and the *labellum* as obcordate; Dr. Swartz has had the precaution to rename our plant, subjoining Jacquin's merely as a probable synonym. In his general description, however, the former will be found to speak of the *column*, only as *almost* equal to the corolla. We have reviewed attentively what each of them has said of his subject, and inspected both specimens of their plants in the Banksian Herbarium (where Jacquin's indeed is flowerless), and are persuaded of the specific identity of the two.

The *corolla*, when full blown, by a contortion of the lower part of the germen which supports it, is always resupinate, that is, with the directions of the upper and lower halves of its plane reversed, as in the european Violets. *Germen* together with the short continuous pedicle about an inch high, cylindrical, tapering downwards, prominently three-ribbed, unilocular, with three parietal placentiform receptacles, attaching numerous *ovula*. *Corolla* superior, five-parted, segments lanceolate, equal in length, varicosely nerved, *two inner* very narrow and linear. *Labellum* (*Nectary* Linn.) placed between the two outer lateral segments of the corolla, which it rather exceeds and differs from in form and consistence, conjoined for the length of its narrow upright turbinately tubular spurless *unguis* with the column in front; *lamina* broad, patent, cordate, rounded, transversely broader, conspicuously veined, 3-lobed, two *lateral lobes* large, rounded, descending far down the sides of the column; *middle one* small, cleft into two blunt flat lobules; a straight prominent nerve passes to the apex from the mouth at the base, on each side of which is placed a raised green-coloured glandule. *Column* (or *gynandrous style*) upon the summit of the germen, upright, semicylindrical, one third or more shorter than the corolla, edge of the summit scarcely raised beyond the anther. *Stamen* an *anther* inserted nearest the nether side of the summit of the column, lid-shaped, moveable, deciduous, brown, hemispherical; *cellules* 4, parallel, convergent, standing on the inner front of the lid-shaped receptacle, and immersed in the cavity at the summit of the column. *Pollen-masses* 4, globular, compact, smooth, parallel, each tailed by a short granulated thread, by which it becomes fixed to the stigma, when the case of the anther

from a cell of which it has been excreted, falls off. *Stigma* concave, fronting the labellum at the top of the column, close to the anther. *Capsule* 3-valved, fenestrate, that is, with lateral openings, its frame remaining connected at both ends. *Seeds* numerous, minute, resembling filings; coated by an *aril*, pointed at each end.

Requires to be kept in the hothouse ; and will do with the treatment we have recommended for the other species in this work.

The drawing was made from a plant which flowered this autumn in the collection of Mr. Griffin, at South Lambeth.

a The labellum and summit of the column, showing the pollen-masses in the position they retain after the case of the anther has fallen: magnified. *b* The four pollen-masses removed from their position. *c* The inner front of the quadrilocular anther. *d* Its converse.



Sp. Pl. Edwards, ed.

Pub. by J. Ridgway 170 Piccadilly, Jan. 1. 1840.

Smith. Sc.

ASCLEPIAS curassavica.

Curassoa Swallow-wort.

PENTANDRIA DIGYNIA.

ASCLEPIAS. *Suprà fol. 78.*

A. curassavica, foliis lanceolatis petiolatis glabris, nitidis, caule simplici, umbellis erectis solitariis lateralibus. *Linn. sp. pl.* 1. 314.

Asclepias curassavica. *Mill. dict. ed. 8. n. 1.* *Swartz obs.* 106. *Jacq. miscell.* 1. 22. *t. 2. f. 2.* *Hort. Kew.* 1. 306. *ed. 2. 2. 81.* *Willd. sp. pl.* 1. 1266.

A. erecta, foliis angustis acuminatis verticillater ternatis, floribus umbellatis terminatricibus. *Browne jam.* 183. 2.

Apocynum radice fibrosa, petalis coccineis, corniculis croceis. *Dill. elth.* 34. *t. 30. f. 33.*

A. curassavicum s. *americanum*, fibrosa radice, floribus aurantiis, *Chamaenerii* foliis latioribus. *Herm. paradis.* 36. *t. 36.*

A. erectum folio oblongo flore umbellato petalis coccineis reflexis. *Sloane jam.* 1. 206. *t. 129. f. 45.*

A. curassavicum fibrosa radice floribus aurantiis *Chamaenerii* foliis angustioribus. *Pluk. alm.* 36. *Phyt. t.* 138. *f. 3.*

Radix perennis, fibrosa. Caulis erectus, bipedalis v. magis, teres, viridis, lanugine albâ rarâ obsoletius pubescens. Folia saturatè virentia, distantius decussata, lanceolato-oblonga, in petiolum prolixius attenuata, subglabra, nervo medio emittente alios laterales subadscendentes. Pedunculi interpetiolares, ad paria superiora foliorum alterni, solitarii, umbellâ pluriflorâ erectâ laxâ simplici terminati, pedicellis basi bracteolatis. Foliola calycis virentia, lanceolata, acuta, villosiuscula, reflexa, duplo breviora corollâ. Cor. crocato-coccinea, laciniis deflexis, lanceolatis, apice incurvulis. Corona staminea aurantiaco-flavescens, brevis; foliolis medio tubo affixis, cucullatis, obtusissimis, singulis corniculum subulatum super stigma ascendens & inflexum exserentibus fiendo. Stigma maximum, apice plano depressum. Folliculi fusiformes, subtriunciales; crassitudine digiti.

Grows naturally in the West Indies. In Jamaica it is known by the name of "Wild Ipecacuanha," and is said to be employed by the negroes for the same medicinal purposes for which the genuine Ipecacuanha is used. The seed, buoyed by a silky plume, is wafted far and near like that of our thistles, like that attaches itself to whatever it meets in its course, and separates at last from the plume which has suspended it, to seek the soil and germinate: proving by this habit a troublesome weed. Even in our hothouses, where it seeds freely, an inconvenience is perceived in as far as the other plants are disfigured by the downy seed.

BRYONIA quinqueloba. Mas.

Five-fingered Cape Bryony. Barren-flowered.

MONÆCIA MONADELPHIA.

BRYONIA. Monoica v. rarò dioica. (*Cal.* 1-phyllus, campanulatus, 5-dentatus: denticulis subulatis. *Cor.* 5-partita, campanulata, calyci adnata: laciniis ovatis. *Gen. pl.* 663.) **MASC.** *Fil.* 3, brevissima, infra coalita, 2 diandra, 1 monandrum. **FÆM.** *Stylus* 3-fidus; *stigmata* 3, emarginata. *Bacca* (infera) parva subglobosa lævis, 1-(3-*Gærtn.*) loc., polysperma; *sem.* pauca, (non plura senis, cellulis propriis conclusa. *Gærtn.*) *Radix* tuberosa. *Caulis* herbaceus, scandens, flexuosus. *Folia* alterna, cirrhis axillaribus instructa, punctis callosis aspersa. *Flores* axillares, pedunculis 1-multifloris. *Jussieu. gen.* 394.

B. quinqueloba, dioica; foliis cordatis sinu baseos profundo, superioribus palmato-quinquelobatis, lobis oblongis obtusissimis distantibus, supernè repando-dentatis, dentibus mucronatis.

Bryonia quinqueloba. *Thunb. prod.* 13. *Willd. sp. pl.* 4. 622.

Radix perennis, magna, oblonga, communiter fusiformis, carnosa. *Caules* herbacei, subangulati, ramosi per cirrhos scandentes. *Folia* 7-nervia, distantia, inferiora sæpe cordato-quinquangularia: lobi superiorum subæquales intervallis latis divergentes, extimi 2 divaricati atque posticè sic auriculati ut conniveant imbricatim sinumque baseos integrent, cum folium diceretis peltatum: circumscriptio cunctis subrotunda; diameter vix unquam tribus uncias latior; omnia conspersa punctis callosis: petiolus brevis, flexus. *Cirrhi* spirales, capillares, solitarii, petiolis laterales. *Pedunculi* collocati inter cirrhum et petiolum, breviores folio, sæpiùs gemini, alter 1-florus, alter pauciflorus, nunc alius effectus (numne scæmineus abortiens?). **MASC.** *Flos* ochroleucus, 1-2 uncias transversus. *Cor.* rotato-campanulata, tenera, lanugine molli brevissimâ pruinata, picta venis, laciniis trinervibus. *Stamen* breve: *fil.* crassum: *anthera* capitata, erecta, oblato-globosa, aurantiaca, constans lineâ sursùm et deorsùm flexâ in plicas arctas.

Native of the Cape of Good Hope; till now, only known by its specific phrase in Thunberg's Prodomus. In such of our gardens into which it has as yet found its way, the plant has been taken for *BRYONIA grandis*, an East Indian species; and in consequence treated too tenderly. It will do in the conservatory and greenhouse; but thrives most at the foot of a wall with a southern aspect, where its stems will extend themselves to the distance of 30 or 40 feet, and produce larger and higher coloured bloom.

Root large, fleshy, tapered, nearly as in the common *Bryony* of our own hedges. *Stems* herbaceous, slender,

angular, flexuose, climbing by spiral filiform capillary tendrils. *Leaves* cordate, deeply indented at the base, *lower ones* often repandly pentangular with an open petiolar sinus or hollow, *upper ones* palmately five-lobed, lobes oblong, outstretched, rounded, and sometimes broader upwards, *two lowermost* eared at the base so as to lap over each other and close the petiolar sinus, when the leaf appears peltate: all are repandly denticulate, with a mucro or point at the end of each small tooth, and thickly speckled with small callous dots which in a dried state often assume a chalky whiteness. *Peduncles* set between the petiole and the tendril, shorter than the leaf, commonly in pairs, 1-3 flowered; sometimes we find a third, but which we have not seen come to perfection with us. *Flowers* of a pinkish buff-colour, 1-2 inches across. *Anther*, an orange-coloured oblate ball, formed by a narrow continuous line winding in short equal close alternate folds upwards and downwards, round a receptacle or knob at the point of the filament. The plants in our collections have produced none but *barren* flowers, such as have the stamen only; hence we have presumed the species to be diœcious, producing the *fertile* flowers, those with the pistil, on a distinct plant.

In Jussieu's system the genus makes a part of the order *Cucurbitaceæ* or Gourd-tribe: an order of which the genera, from imperfect definition and inconnexedly assorted species, are almost useless, and their revision by a competent botanist an urgent want in the science.

BRYONTIA quinqueloba is nowhere mentioned as a plant ever known to have been in any European collection; nor can we say at what period it was introduced. Mr. Edwards received the branch from which the drawing was made from Lady Aylesford, by whom the plant was purchased, at the nursery of Messrs. Whitley and Co. in the King's Road, Parson's Green.

The Banksian Herbarium contains a spontaneous specimen, remitted by the late Mr. Masson from the Cape of Good Hope.

Increased with ease by cuttings; but the root soon acquiring considerable bulk, small-sized garden-pots should not be used for the plants.

a The calyx. b The stamen standing on the disk of the corolla.



Pl. China *Anders del*

Tab. 15. 170. Puccinellia, 1816.

Smith sc

CASSIA occidentalis.

Occidental Cassia.

DECANDRIA MONOGYNIA.

CASSIA. *Cal.* 5-partitus coloratus deciduus. *Cor.* regularis: *pet.* 5, quorum inferiora majora. *Stam.* (declinata,) 3 inferiora longiora antheris longis arcuatis, 4 lateralibus antheris brevibus, 3 superiora brevibus antheris effœtis. *Germ.* pedunculatum. *Legumen* oblongum bivalve dissepimentis transversis multiloculare loculis monospermis, nunc planum membranaceum siccum, latius et breve, aut longum & angustius, nunc subcylindricum lignosum intus sæpè pulposum vix dehiscens. *Arbustula* aut *suffrutices*; *folia* pinnata, oppositè 1-12-juga aut rariùs multijuga, *petiolo* communi ad basin aut et inter foliola sæpè glanduloso; *flores* axillares *spicati* aut rariùs *subsolitarii*. *Jussieu.* gen. 348.

C. occidentalis, glabra; foliis subquinquejugis ovato-lanceolatis, margine scabris, exterioribus majoribus, glandula basilari, pedunculis multifloris axillaribus et subpaniculato-terminalibus, leguminibus linearibus falcatis. *Pursh amer. sept.* 1. 305.

Cassia occidentalis. *Linn. sp. pl.* 1. 539. *Mill. dict. ed.* 8. n. 1. *Swartz obs.* 159. *Willd. sp. pl.* 2. 518. *Michaux bor-amer.* 1. 261. *Hort. Kew.* 2. 51. *ed.* 2. 3. 26.

Cassia planisiliqua. *Linn. sp. pl.* 1. 540. *Willd. sp. pl.* 2. 518; synonymum monitum *Herbarii* et notæ *manuscriptæ* in *Museo Banksiano* assumptum.

C. foliolis 5-parium ovato-lanceolatis, glabris glandula supra basin petiolorum. *Roy. lugdb.* 468.

C. herbacea, major, erecta, ramosa, foliis ovato-acuminatis, siliquis angustioribus compressis, spicis laxioribus terminalibus, assurgentibus. *Brownè jam.* 224. 10.

Senna occidentalis, odore opii viroso, orobi pannonici foliis mucronatis, glabra. *Comm. hort.* 1. 51. t. 26. *Sloane jam.* 2. 48. t. 175. f. 3, 4.

Herbacea, biennis? v. *suffruticosa*, *sesqui-tripedalis*, punctis vagis scaber, exaratus deorsum à singulo petiolo sulcis duobus. *Folia* superiora foliolis quinque parium, ovato-lanceolatis, glabris, margine scabris, acuminatis, exterioribus sensim majoribus, fœtidis. *Racemus terminalis.* (*Linn.*) *Flores* per paria? *Cal.* subherbaceus. *Cor.* *pet.* concava, flava absque maculâ, venosa, breviter unguiculata; summum medium obcordatum, emarginatum; lateralibus 2 superiora obovata, infernè versùs attenuata; inferiora 2 divergentia. In floribus quos coram habuimus stamina 2 corollæ subæqualia filamentis antherâ longioribus, 4 (6?) filamentis antherâ brevioribus, reliqua cassa: anth. 2 inferiores maximæ, arcuatæ, apice biforatæ, margine infimâ lobulo laminoso præfixæ; laterales 4 biforatæ lobulo antico obsolescente; reliquæ deformatæ. *Pist.* corollæ æquale, virens. *Germ.* sericeum, compressum; stylus 3-plo brevior; stigma rima secundum latus interius styli directæ, suprâ dilatata, glabra. *Legumen* fuscum angustum subsalcato-lineare, marginatum lineâ cartilagineo-albicante.

The species grows naturally in the West Indies, in Virginia and in Carolina, is sometimes described as herbaceous and biennial, sometimes as perennial, sometimes as frutescent or shrubby. Botanists have given it a full share of their attention, but it had been no where exemplified by a coloured figure. The *stem* seldom exceeds two feet in height, generally branched; *leaves* pinnate, leaflets five-paired, according to Linnæus only three-paired in the maturer plant, outer pairs gradually larger, each leaflet ovate lanceolate, rough at the edge; *petiole* with a single protuberant gland on the inside of its base: when handled they diffuse a strong narcotic scent, which in our colonies has acquired the plant the appellation of "The Stinking Weed."

Flowers on the racemes (which are axillary and terminal) in pairs; *corolla* concave, veined, of a dullish unspotted yellow colour; *anthers* opening by a double orifice at their summit, from the under margin of which a roundish laminar lobe is projected; fading from a light to a tawny yellow. *Stigma* a dilated termination of the style. of a deep vivid green colour. *Legume* or pod, narrow, falcately linear, flattened, torose or protuberant where each seed lies, edged by a narrow pale cartilaginous border.

Upon the authority of a MS note in the Banksian Museum, written when the Herbarium of that establishment was collated with the Linnean, we have resolved *CASSIA planisiliqua* into the present species. *Planisiliqua* was first recorded by Van Royen (or rather by Linnæus under his name) in a work subsequent to the Hortus Cliffortianus in which *occidentalis* first appeared, and had been probably taken up solely from the figure cited for it from Plumier's work. The specimen found under that name in the Linnean Herbarium is an East Indian plant with eight-paired leaves, and plainly neither that of the description nor of the synonym.

The drawing was made from a plant raised from seed, which flowered this autumn in Lady Aylesford's collection at Stanmore.

A hothouse plant cultivated by Philip Miller in 1759. In Jamaica it is very common, and we are told used by the negroes as medicine.

a The stamens and pistil. *b* A stamen: magnified. *c* The lobe that projects from below the double orifice of the larger anthers: magnified. *d* The pistil: magnified.



Bot. & Chénier, del.

Bot. & Chénier, del.



GOSSYPIUM barbadense.

Barbadoes Cotton-Tree.

MONADELPHIA POLYANDRIA.

Nat. ord. MALVACEÆ.

Div. III. Stamina in tubum corolliferum connata, indefinita. Fructus simplex multilocularis.

GOSSYPIUM. Cal. cyathiformis (brevissimus) punctatus (repando-) sub5-lobus, calyculo cinctus majore (plano) 3-fido laciniis dentato-cristatis. (Cor. pentapetala.) Antheræ (reniformes) in apice & superficie tubi. Stylus 1, (columnaris longitudine staminum:) stigma 3-4, (crassiuscula.) Caps. (3-s.-4-loc., 3-s. 4-valvis Gen. pl.) polysperma, seminibus lanâ involutis, (angulo loculamentorum centrali duplici serie affixis. Gart.) Arbusculæ aut frutices quidam subherbacei; flores axillares. Folia quorundam nervo præcipuo subtus glanduloso. Jussieu gen. 274.

G. barbadense, foliis superioribus trilobis, inferioribus quinquelobis, caule læviori, seminibus liberis. Swartz obs. 266.

Gossypium barbadense. Linn. sp. pl. 2. 975. Mill. dict. ed. 8. n. 2. Hort. Kew. 2. 453. ed. 2. 4. 224. Swartz in Nov. act. holm. 1790. 21. Willd. sp. pl. 3. 806.

G. frutescens annuum, folio trilobo, barbadense. Pluk. alm. 172. Phyt. t. 188. f. 1.

Caulis orgyalis et ultrà, suffruticosus, biennis et ultrà, ramosus, lævis: rami erectiusculi, teretes, læves s. pubescentes. Folia diam. 4-5-unciali: lobis ovatis, acutis, nervosis, subtus pubescentibus et quoque suprâ ad nervos: petioli teretes, patuli. Pori 3 in nervis foliorum medii. Pedunculi 1-flori. Segmenta calycis exterioris magna, cordata, laciniato-cristata, acuta. Flores magni, flavi. Pet. basi coherentia, obcordata, imbricato-rotata lobo altero sinûs summi eccentrici obsolescente, extra imbricationem foris pubescentia, maculâ sanguineâ in basi. Caps. ovata, acuminata, glabra. Sem. oblonga, plura, nigra lanâ albâ involuta. Tota planta sæpius conspersa atomis atropurpureis.

Scarcely any diligence can at this day enable us to determine, so precisely and securely as it were to be desired, the species Linnæus intended by *barbadense*. The specimen in his Herbarium being doubtful; the figure cited for it, from Plukenett's work, deficient in character; and the specific phrase too vague for near distinction. The present plant however is that which has passed traditionally in our collections for *barbadense*, and is the one of the Banksian Herbarium, Hortus Kewensis, Swartz, Willdenow, &c. &c. The species approaching the nearest to it are the East Indian

religiosum with coloured wool, and the South American *hirsutum* with green seed, each distinct from the present, where the wool is white and the seed black. Yet Dr. Swartz, after observing the three in their cultivated state in the colonies of the West Indies, says, that they are with difficulty recognised from each other; and that they vary in so many and such material points, that he can easily believe them to be one species. But are not near species of most phænogamous vegetables liable, from intermixed culture, "to run," as the gardeners say; or, in other words, to become a mixed race? And are not close species which produce the staple of a long-standing and extensive commerce, and have been purposely brought together with the view of experiment and improvement, especially liable to intermixture of race and consequent variation? But can we adduce as evidence of derivation from a same primary type, intercurrent variations of vegetables so circumstanced?

The plant with us is perennial, and grows to the height of 7-8 feet; the stem dying down every year, after producing seed, if kept constantly in the bark-bed of the hot-house.

The cotton or wool consists of the fleeces of the seed, forming a separate ball in each cell of the capsule. When picked from the capsule for use, this is freed from the seed "by means of a small mill, consisting of two bright steel rollers, each about an inch in diameter, set parallel within the distance of about the 20th part of an inch. These rollers move different ways, and draw the cotton through them, while the seeds are forced out of their respective little balls of down in which they are enclosed." It is of inconceivable elasticity; and a large mass, by a compression familiar to those who pack it for carriage, may be reduced within a compass incredibly small. Said to be a dangerous cargo, being subject to take fire if at all damp when packed, and burning upon admission of air with great fury.

The drawing was made from a plant which flowered in Mr. John Hall's collection at Notting Hill; whence specimens were liberally communicated to Mr. Edwards.

a The 3 balls of cotton, one in each loculament. *b* Dissepiment placed at the centre of a reflected valve. *f* The back of one of the three valves. *c* A seed partly bared of its wool. *d* The stigmas. *e* The anthers of the monadelphous stamens.



Syd. E. thomasi, det.

Feb. 19 / 1840 Recd. at N.Y. Feb. 1. 1840.

Smith. L.

IPOMŒA hederacea.

Blue american Ipomœa or The morning-glory.

PENTANDRIA MONOGYNIA.

IPOMŒA. Suprà fol. 9.

I. hederacea, annua, pubescens; foliis cordatis, profundius trilobis, lobis acuminate, medio ventricoso, sinibus arctatis fundo rotundatis; pedunculis uni-trifloris; tubo calycis barbato, laciniis bracteisque approximatis recurvis; corollâ subinfundibuliformi.

Ipomœa hederacea. Jacq. coll. 1. 124. Ic. rar. 1. t. 36. Willd. sp. pl. 1. 884. Persoon syn. 1. 184.

Ipomœa barbata. Roth catalecta bot. 1. 37. Id. in Neue beytr. 156. Ann. bot. 2. 13. Persoon syn. 1. 184.

Ipomœa Nil. Pursh amer. sept. 1. 146; (exclusis Bot. Mag. & Dill. elth. quoad fig. 91.)

Convolvulus Nil. Michaux bor-amer. 1. 189; aliorum quoque cum agatur de plantâ boreali-americanâ sub illo nomine pro eadem specie cum asiaticâ vel australi-americanâ minùs rectè sociata.

Convolvulus cæruleus, hederaceo folio magis anguloso. Dill. elth. 1. 96. t. 80. fig. 92.

C. flore pulchro cæruleo, foliis in sinus angulosque divis. Clayton n. 504. in Gron. virg. ed. 2. 29.

C. trifolius Virgineus. Park. theatr. 169.

Annua, volubilis. Caulis teres, ramosus hispidiusculè villosus, altè scandens. Folia plùs minùs triuncialia, nunquàm non divisa, interdùm subquinqueloba, utrinque appressè villosa, lobis lateralibus adscendentibus conniventibus, à medio ventricoso latiore profundius et arctius inciso sinû cum fundo rotundato distinctis, petiolo hirsutiorè, 2-4-unciali. Pedunculi axillares, solitarii, 1-2-flori, violacei, horizontali-divaricati, petiolo breviores, fructiferi arrecti, modò adedè curti ut flos fermè sessilis, supernè hirsutiores. Bractea 2 oppositæ, lineares, hirsutæ, acutulæ, suprà recurvatæ, floribus suppositæ instar calyculi. Cal. tres partes uncia longus, fermè æquans dimidium corollæ, tubo brevè hirto pilis copiosis spissis subrufescentibus, foliolis isometris, ovato-attenuatis, subulato-elongatis, nudiusculis, cum pilis raris glandulæ parvæ insitis, in fructu revolutò-divergentibus, interioribus duplo angustioribus. Cor. infundibuliformis, violaceo-cærulescens, tubo brevissimo, fauce turbinatâ, limbo rotato-patentissimo, vividè cæruleo, sesquiunciam ferè transversò, laciniis brevibus rotundatis, mucronatis, emarginatis. Fil. basi barbata. Stigma capitatum, granulatum, 2-3-lobatum. Caps. oblato-rotunda, erecta; sem. subnata, internè versus attenuata, nigra, glabra, circiter 2 in singulo loculo.

The *CONVOLVULUS hederaceus* of the first edition of the Species Plantarum comprised, as varieties, plants which constituted the *purpureus*, *Nil*, and *hederaceus* of the second edition of that work. But still two distinct species are

found to remain comprised in the synonymy of *Nil*; the present, and the one figured in the 188th plate of Curtis's Botanical Magazine by that name. And if we were to determine *hederaceus* and *Nil* by the synonyms adduced by Linnæus, we should be of opinion that they included four species between them: 1. The asiatic plant; (*Curt. bot. Mag. t. 188. Dill. elth. 96. t. 80, fig. 91.*) 2. That from the Coast of Guinea; (*Dill. elth. 97. t. 81. fig. 93.*) 3. The South American plant figured in the Flora Peruviana of Ruiz and Pavon, t. 119. f. *a.* by the title of *Ipomœa cuspidata*; (*Dill. elth. 99. t. 83. fig. 96.*) 4. The one before us from North America; (*Dill. elth. 96. t. 8. fig. 92.*)

Mr. Brown, in his Prodomus of the Flora of New Holland, according to his view of *C. Nil* and *hederaceus* of Linnæus, has reduced them to one species, which he has transferred to *Ipomœa* by the name of *hederacea*. But Jacquuin had already enrolled our plant in that genus by the same appellation, which we have maintained for it in right of priority; and the rather as *Nil* is thus vacant for the other.

In our plant the lateral lobes of the leaves converge towards a broader ventricosely ovate centre one, from which they are separated by deep contracted sinuses, rounded at the bottom. In the other the lateral lobes are shorter, and diverge from the one in the centre, which is lanceolately ovate, and separated by shallow divaricate sinuses, sometimes obliterated. The tube of the calyx in the present is clothed with a thick hirsute tawny pubescence; the segments are long, subulate, and revolutely patent, in the other straight and connivent. The limb of the corolla is here rounded, there cornered.

It is seen in perfection only in the very early part of the day, and is called "the Morning Glory," in America. The seed should be sown in the spring, with that of other annuals, and the plants treated like those of the twining kinds. The species is seldom seen in our gardens, altho' known in them from the days of Parkinson.

Native of Virginia and Carolina; growing near gardens and in hedges on river-sides.

The drawing was made from a plant raised in the nursery of Messrs. Whitley, Milne, and Brame, in the King's Road, Parson's Green, from seeds received from Paris.

a A section of the corolla. *b* The pistil. *c* Seed-vessel and calyx.



Lyd. Edwards del.

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Smith. Sc.

IPOMŒA tuberculata.

Tubercled Ipomœa.

PENTANDRIA MONOGYNIA.

IPOMŒA. *Suprà fol. 9.*

I. *tuberculata*, frutescens; ramis tuberculatis; foliis quinato-digitatis, foliolis 2 extimis integris v. bi-tripartitis; pedunculis 3-4-floris, erectis; calyce brevi, obtuso, crassiusculo; corollâ hypocrateriformi.

Convolvulus digitatus. Roxb. *corom. MS. cum icone pictâ ineditâ in Museo-Banksiano.*

Suffrutex gracilis, volubilis; caulis (aliquandò plures) teres, ramosus; rami tuberculis nunc passim innocuè subspinescentibus scabrati. Folia glabra, 2-3-uncialia, foliolis ovali-lanceolatis, obtusulis, mucronulatis; extimis brevioribus sæpè bi-trilobo-divisis, subpetiolatis v. sessilibus et cum proximis duobus obiter cohærentibus: petiolus non multùm brevior folio, sulco à supino exaratus, sæpiùs consitus tuberculis minutis vagis. Pedunculi axillares, solitarii, trichotomo-triflori, crassiusculi, erecti, folio breviores, supernè bi-bracteolati; pedicellis brevibus. Cal. tubo bis brevior, virens, crassus, subcordato-ovatus, foliola exteriora 3 cordata, convexa dorso, obtusa; interiora 2 sublongiora, tenuiora, subacutiora. Cor. 2 uncias circitèr profunda, laciniis brevissimis rotundatis, de fauce intus violaceo-purpurascens per limbum sulphureo-pallescent. Stigma capitato-didymum. Sem. pauca, majuscula, pubescentia, externis angulis lanata.

A species extremely near to the *CONVOLVULUS mucronatus*, first recorded by Forster as native of the island of Tanna, in the South Sea; but afterwards, in his account of the vegetables collected by himself at the Cape Verd and other islands in the Atlantic (see *Commentationes R. S. S. Gottingensis*) as natural to St. Jago. The last place is that inscribed on his sample, and on his drawing in the Banksian Museum, where it is found under the title of *acuminatus*, which was changed upon publication. Samples, now preserved in the above Museum, have been collected subsequently in the same quarter by Sir George Staunton, and this is, we have no doubt, that whence Forster really brought the plant, not from Tanna. The species comes likewise near to the *IPOMŒA pendula* of Mr. Brown's *Prodromus* of the Flora of New Holland. But independently of difference in the general port of the plants, the present is distinct, in having a foliage without any traces of being ciliate; in having 3-4-flowered peduncles; and by a corolla that is

rather salver- (hypocrateriform) than funnel-shaped (infundibuliform). The rough tubercled branches of our plant afford at first sight another distinction. In *pendula* a woolly pubescence will be found near the base of the petioles, which we did not perceive here.

Ipomœa tuberculata is a slender twining suffrutescent plant, attaining the height of five or six feet; native of the East Indies, where it grows in the hedges; flowers during the cold season, and is reckoned the most ornamental of its genus. *Stem* round, with a brownish bark; branches numerous, tubercled, with here and there a tubercle assuming a spinelike appearance. *Leaves* smooth, quinate, 2-3 inches in diameter; leaflets oval-lanceolate, obtuse, with a small point, outer ones generally shorter and 2-3-cleft, commonly distinct from the rest, and subpetioled: *petioles* shorter than the leaf, minutely tubercled. *Peduncles* solitary, firm, trichotomously three-flowered, upright, shorter than the leaf, bibracteolate. *Calyx* thick, of a deep green colour, two or three times shorter than the cylindrically lengthened faux; outer leaflets rather shorter, cordate. *Corolla* about two inches deep, of a pale violet-purple throughout the tubular portion, of a faint yellow at the limb; segments rounded and shallow. *Seeds* largish, brown, few, woolly at the angles.

Last spring a packet of seeds arrived from the East Indies, sent by Sir Evan Nepean to Messrs. Whitley, Milne, and Brame, nurserymen, King's Road, Parson's Green; among them were those from which the present plant was raised. These were stated to have been collected in the botanic garden at Calcutta.

On the transfer of the species from *CONVOLVULUS* to *Ipomœa*, Dr. Roxburgh's name of *digitatus* could not be retained, it being already occupied by another.

a The section of the lower part of the corolla. *b* The pistil.



Bot. Univers. del.

Bot. by J. Lindley, 1820. Baccellia 1. 1. 1816.

Smith. 1.

MONARDA punctata.

Spotted Monarda.

DIANDRIA MONOGYNIA.

MONARDA. (Stamina 2 fertilia 2 abortiva, sub labio corollæ superiori inserta.) *Cal.* cylindricus striatus 5-dentatus. *Cor.* (hypogyna,) cylindrica longior bilabiata, (staminifera,) superius recta angusta integra, involvens stamina, inferius reflexa latior 3-loba lobo medio longiore. *Germ.* (4, 1-sperma basi mediante stylo connexa. *Brown. prod.* 499 :) *stylus* 1, ex receptaculo enatus; *stigma* bifidum. *Sem.* 4, (Cariopsides. *Richard.*) erecta, basi affixa receptaculo, in calyce persistente recondita; *embryo* absque albumine. *Jussieu. gen.* 111. *Caulis* herbaceus, tetragonus. *Rami* oppositi. *Folia* petiolata, opposita, indivisa remotiusculè serrata, resinoso-punctata. *Verticilli v. capitula* multiflora, involucrati. *Bracteæ* setaceæ. *Vahl enum.* 1. 220.

M. punctata, glabriuscula, floribus mediocribus verticillatis, bracteis lanceolatis nervosis coloratis verticillo longioribus, foliis lanceolato-oblongis remotè serratis glabris, caule obtusangulo, villosa-canesciente. *Pursh amer. sept.* 1. 18.

Monarda punctata. *Lin. sp. pl.* 1. 32. *Mill. dict. ed.* 8. n. 3. *Hort. Kew.* 1. 37. *ed.* 2. 1. 51. *Andrews's reposit.* 546. *Vahl enum.* 1. 220. *Willd. sp. pl.* 1. 126.

Monarda lutea. *Michaux bor-amer.* 1. 16.

M. floribus verticillatis, corollis punctatis. *Gron. virg. ed.* 2. 6.

Clinopodium virginianum angustifolium, lamii flore luteo maculato. *Moris. hist.* 3. 375. s. 11. t. 8. f. 8.

Clinopodium virginianum angustifolium, floribus amplis luteis purpureo-maculatis, cujus caules, sub quovis verticillo, 10 v. 12 foliolis rubentibus est circumcinctus. *Pluk. alm.* 111. *phyt. t.* 24. f. 1.

Radix perennis. *Caulis* herbaceus, tetraqueter angulis rotundatis, ramosus, villosus. *Folia* sesqui-biuncialia, lata semunciam, lanceolata, ascendenter nervosa, à medio sursum serrata, petiolata, resinoso-punctata glabriuscula, sub lente inspecta villosa, odorata. *Verticilli* plures (3-5) axillares, sessiles, capitato-densati, erecti. *Involucra* suboctophylla, longiora floribus, patentissima, violaceo-rubentia, foliolis plus minus inæqualibus, basi ciliatis. *Cal.* minutè villosus, ore pilis prolixioribus barbatus, dentibus acutis denuò stellatis. *Cor.* uncialis, flava, resinoso-punctata, densè villosa, semiringens; tubus gracilis longitudine calycis; faux brevis, turbinata, anticè intrusa; labium superius galeatum, erectum, rubro marmoratum, dorso carinatum, apice barbatus; inferius remissiùs rubro-punctatum, lobo medio rotundato intus convexo recto 3-plo latiore, lateralibus subdeflexis. *Filamenta* villosiuscula. *Anth.* à summo ad imum bilobæ, lobis perpendicularitèr divaricatis. *Stylus* capillaceus, villosus; *stigm.* 2 inæqualissima.

The *Labiata*, to which *MONARDA* belongs, compose one of the most obviously signalized symmetrical orders in the

whole of Jussieu's System. In that of Linnæus, however, a portion of these naturally co-ordinate plants, from having two of the four stamens imperfect, have been excluded from the Class Didynamia, which comprises the bulk of them, and in critical strictness included in Diandria; among these is the present genus. The features which characterize the genera throughout this natural tribe, are, a monopetalous bilabiate corolla, four single-seeded germens connected at the base by the style, and fruit which abides within the persistent calyx. Each fruit consists of four (from miscarriage sometimes fewer) dry one-seeded pericarps, adhering in such manner to the integument of the seed as not to be discriminated from it. Every such pericarp, with its contents had been till recently deemed a naked seed; but is now included, by Mr. Brown, in the term *cariopsis*, appropriated by Monsieur Richard to the kind.

Punctata is a tolerably hardy perennial plant, native of North America, where it is found, according to Mr. Pursh, in sandy fields, in the tract of country which reaches from New Jersey to Carolina. Its most conspicuous ornament consists in the pink bractes, which form the involucre beneath each whorl of the inflorescence. The yellow corolla, when inspected near, will be found thickly speckled with small resinous dots, and variegated, or rather marbled, with pink stains. We do not know the exact height the plant may reach, but have never seen it more than a foot and a half high. The bloom smells like that of the common Balm; the foliage more like that of Mint. The teeth of the orifice of the calyx ultimately spread into a small star. The imperfect stamens are filaments without anthers. The anthers of the perfect stamens divide into two vertically divaricate lobes. The style is villose, with two simple setiform stigmas of very unequal lengths.

Cultivated in this country in 1714, by Mr. Thomas Fairchild.

The drawing was made this summer from plants which flowered in the nursery of Messrs. Lee and Kennedy, at Hammersmith.

a The calyx. *b* The corolla removed from the calyx shown laterally. *c* The same dissected vertically, to show the two perfect stamens and pistil, and also the two imperfect filaments. *d* The pistil, with the two unequal stigmas.



Edw. A. S. del.

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Smith & Co.

PASSIFLORA glauca.

Cayenne Passionflower.

MONADELPHIA PENTANDRIA.

PASSIFLORA. *Suprà fol. 13.*

P. glauca, foliis cordatis, trilobis, glabris, lobis ovatis æqualibus, petioliis glandulosis, stipulis semiovatis. *Hort. Kew.* 3. 308.

Passiflora glauca. *Willd. sp. pl.* 3. 618. *Jacq. schænb.* 3. 70. t. 384. *Hort. Kew. ed.* 2. 4. 152.

Passiflora stipulata. *Aublet guian.* 2. 830. t. 325; (*sine flore.*)

Tota glabra. Caulis fruticosus, ramosissimus, teres (striatulus,) cirrhis simplicibus axillaribus scandens, 10-pedalis et ultrà. Folia alterna, basi cordata, semitriloba, integerrima, 5-nervia, subtùs glauca & venulis reticulata, suprà saturatè virentia, lobis ovatis & obtusis: petiolo tereti (suprà et utroque latere sulco exarato, subtetraquetro, subtùs convexiusculo), plus minus sesquiunciali, et utplurimùm bi-quadriglanduloso. Stipulæ geminæ, falcato-oblongæ, integerrimæ, obtusæ cum setulâ terminali, oppositæ, ferè unciales. Pedunculi uniflori, axillares, solitarii, patentissimi, unciales, supernè bracteolis duabus oppositis lanceolatis & acutis (rectiùs tribus ovatis verticillatis pro involucrio.) Flores odoratissimi, diametri duarum cum dimidiâ unciarum. Calycis foliola 5, lanceolata, acuta, patentissima (tandèm reflexa,) foris virentia, intùs pallida. Petala alba, figurâ longitudine (inflexione) & sitû calycis. Radii coronæ plurimorum ordinum: exteriores (ordine gemino) patentissimi, ferè longitudine corollæ subulati, ad basin nivei, dein violacei, hinc iterùm albi, (in serie secunda non multùm breviores:) reliquii erecti, albi, capitati, brevissimi, (convexiùs fastigiantes) numerosi, intimi longiores & pertingentes usque ad stamina. Filamenta unâ cum columnâ communi stylo et stigmate pallida, punctisque sanguineis aspersa. Antheræ flavæ. Germ. ovale, nitidum, viride. *Jacquin loc. cit.*

This fine shrub, a native of Cayenne, is not often known to blossom in our collections. When planted in the ground within the hothouse, it mounts to a considerable height, and we have seen it with a tall flexible stem, nearly an inch in diameter; branched and climbing, as usual with the genus, by claspers. Leaves broader than long, 4-5 inches over, half three-lobed, cordate at the base, lobes ovate, obtuse, dark green on the upper side, grey on the under and reticulately veined: petioles with from 2 to 4 glandular tubercles: stipules two, opposite, large, parabolical, lanceolate. Peduncles solitary, one-flowered, rather thick: involucre of three small ovate bractes, close below the flower. Flowers fugitive, tender, delightfully fragrant, little less than three inches in diameter. Calyx and corolla nearly of one

size position and inflection, first patent, then reflex; the former greenish without, pale within; the latter uniformly white. *Crown* variegated in circles of white and violet; *outer rays* filiform, subulate, slender, in a double somewhat alternately unequal series, nearly even with the corolla, patent; *inner rays* much shorter, erect, promiscuously crowded, capitate, forming a convex umbellike disk in the flower, an appearance which we are not aware they assume in any other species; *inmost rays* of the same shape but taller than the inner, in one rank and inclined towards the column which they surround and mask, standing immediately upon the *operculum* or small ruffle that lies over the nectary, a feature which constitutes a second anomaly in the genus. *Germen* elliptic, smooth. *Shaft* of the column, *filaments*, *style*, and *stigmas* spotted. *Anthers* yellow.

The drawing was made in the beginning of last autumn, from a plant which flowered in the collection of Comtesse de Vandes, Bayswater. The specimen was too far decayed after Mr. Edwards had finished the design, for us to take the description of the flower, and we have relied chiefly on the drawing in what we have said.

Aublet, by whom the species was first recorded, found it growing naturally in Cayenne, but did not see the blossom.

Introduced in 1779 by Messrs. Lee and Kennedy, of the Hammersmith nursery.

a Outer double rank of rays. *b* Inner multiplied rays. *c* Inmost single rank, stationed on the operculum and surrounding the shaft of the column, *d* The fleshy elevated pediment of the column. *e* The nectary.



Sppl. Edwards del.

Publ. by J. Ridgway 170 Presumably Feb 1896.

Smith. Sc.

JASMINUM azoricum.

Azorian or Ivy-leaved Jasmine.

DIANDRIA MONOGYNIA.

JASMINUM. Suprà fol. 1.

Div. Foliis compositis.

J. azoricum, foliis ternatis; foliolis ovatis subcordatisque, calycibus campanulatis glabris, corollæ laciniis tubo æqualibus. *Vahl enum.* 1. 31.

Jasminum azoricum. *Linn. sp. pl.* 1. 9. *Mill. dict. ed.* 8. n. 6. *Hort. Kew.* 1. 9. *ed.* 2. 1. 17. *Willd. sp. pl.* 1. 39.

J. azoricum trifoliatum, flore albo odoratissimo. *Commel. hort.* 1. 159. t. 82.

Frutex sempervirens in hortis adminiculatus longitudinem viginti pedum acquirens, ramosissimus; rami teretes glaberrimi folia pedunculi calycesque virore læto nitentes. Ramuli laxè paniculato-floriferi, in foliis superioribus axillares, villis minutissimis subpubescentes; pedunculi subelastico-rigentes brachiato-oppositi et terminales; pedicellis trichotomis v. unifloris, extimis basi bracteolatis. Folia ternata, remota, firmius membranacea superficie et consistentiâ ferè CITRI Aurantii; foliolis petiolatis, subundulatis, subcordato-attenuatis, acuminatis, terminali duplo majore, proluxius petiolato, sesquitriunciali: petiolus communis divaricatus, subflexuosus, rigidiusculus. Cal. turbinato-campanulatus, estriatus, brevis, denticulis 5 minutis erectis, ovato-acutis. Cor. alba, longitudine vix excedens trinas partes uncia, foris aliquando purpureo suffusa; tubus subsemuncialis; limbus parùm brevior, laciniis 5 explanatis, oblongo-lanceolatis, acutis, basi subovatis. Anth. flavæ, media tubo sessiles, latentes. Stigma tubo exsertum, clavato-bifidum, compressum, viride. Bacca nigra, globosa magnitudine ferè PRUNI Cerasi minoris. Flores odoratissimi.

Grows naturally in the island of Madeira, and has been known in the dutch gardens according to Commelin from 1693, in the english from about 1724. No plant presents itself more constantly in our greenhouses than this. The bright lively hue of its evergreen foliage, the fragrance and long succession of the bloom, render it a favourite with all gardeners. When planted in the border of a conservatory it may be trained to the height of 20 feet and more, and will frequently ripen its berries, which are about the size, form, and colour of a small common black cherry. Our milder winters do not destroy it when planted in a warm border against a southern wall; and so treated it thrives better than in any other situation.

An evergreen shrub. Stem slender, requiring to be sup-

ported; branches, peduncles, and calyx bright green. *Leaves* ternate, membranous, smooth, with largish cordate acuminate petioled leaflets, of a full shining green, like that of the foliage of the Orange-Tree, terminal one from an inch and half to three inches long. *Blossom* white, produced from the axils of the outer foliage and ends of the branches, in loose trichotomous brachiately disposed panicles. *Calyx* tubular, short, minutely 5-toothed. Tube of the *corolla* slender, longer than the elliptic-lanceolate expanded segments.

We have found no coloured representation of this species, altho' one so long and generally popular with those who amuse themselves in the flower-garden. It is multiplied by offsets and layers with ease; but is in such general request, that the nurserymen tell you, that, let their stock of its plants be ever so large, they never have one too many.

The drawing was made at Mr. Rolls's nursery, King's Road, Little Chelsea.

a The calyx. *b* The tube of the corolla dissected, to show the stamens.
c The pistil. *d* A ripe berry.



STYLIDIUM graminifolium.

Grass-leaved Stylidium.

GYNANDRIA DIANDRIA.

STYLIDIUM. *Cal.* superus, 2-labiatus, persistens. *Cor.* 1-pet., irregularis, 5-fida, laciniâ quintâ (Labello) dissimili, minore, deflexâ (rarò porrectâ), reliquis patentibus (rarò geminatim cohærentibus;) tardius decidua. *Fil.* cum stylo in columnam longitudinalitèr connata. *Columna* reclinata, duplici flexurâ. *Antheræ* stigmati incumbentes, bilobæ, lobis divaricatissimis. *Stylus* 1: stigma obtusum, indivisum. *Caps.* 2-valv-, 2-loc., dissepimento parallelo supernè quandòque incompleto. *Sem.* axi dissepimenti affixa, erecta, parva. *Album.* semini conforme, carnosum, suboleosum.

Herbæ (v. Suffrutices) *scapigera* v. *caulescentes*. *Folia radicalia*, conferta, in petiolum quandòque attenuata; *caulina* sparsa, nunc verticillata, sæpè minora bractæformia, rarò apice cirrhosa v. basi soluta. *Inflorescentia varia*. *Calycis labium* exterius bidentatum v. 2-partitum, interius 3-dentatum v. 3-partitum. *Cor.* purpurea, alba, violacea, rarò lutea, extùs sæpè pilis glanduloso-capitatis, tubo basi torto, nunc brevissimo; fauce sæpiùs coronatâ denticulis glandulisve, quandòque nudâ; limbi laciniis 4 majoribus geminatim approximatis, utriusque paris alterâ sæpè minore. *Labello* ante expansionem labio angustiori calycis opposito (antico), torsione tubi mox laterali, disco sæpiùs crassiusculo, intùs parùm convexo, basi utrinque lacinulâ sæpiùs appendiculato, quandòque simplici. *Columna* linearis, limbo longior, ad ejusdem latus alterum (ubì labellum) exserta, dum reclinata flexurâ exteriore subtùs irritabili, irritata cum impetu resurgens, laterique opposito floris incumbens stigmate deorsùm spectante. *Antheræ* ante expansionem lobis verticalibus, modicè patentibus, demùm divaricatissimis, apicibus nunc distinctis, longitudinalitèr dehiscentibus. *Stigma* primò obsoletum antheris incumbentibus occultatum, post earum dehiscentiam auctum, subexsertum, quandòque hispidulum v. papulosum. Brown, prod. 1. 565, 566, 567.

Div. I. Capsula ventricosa, subovata, nunc spherica v. oblonga.

Subdiv. B. *Folia radicalia* conferta, squamis nullis interstinctis. *Calycis labra* ($\frac{2}{3}$) dentata. *Scapi* aphylli. Brown, ubi suprâ, 567, 568.

S. graminifolium, foliis linearibus margine denticulatis, racemo subspicato simplici scapoque glanduloso-piloso, labello basi appendiculato. Brown, ubi suprâ, 568.

Stylidium graminifolium. Swartz in *Mag. der gesell. nat. fr. zu Berlin*, 1807. 49. tab. 1. f. 1. Willd. in cit. 55. *Mag. Id. sp. pl.* 4. 146. *Hort. Kew. ed.* 2. 5. 222. *Labill. nov. holl.* 2. 65. t. 215.

S. serrulatum. Persoon. syn. 2. 210.

Ventenatja major. Smith exot. bot. 2. 13. t. 66.

Candollea serrulata. Labill. in *annal. du mus.* 6. 454. t. 64. f. 2.

A genus established under the present name by Dr. Swartz. Its species are numerous, and found in the East Indies, New Holland, and Van Diemen's Island. The flowers, after some contestation among botanists in regard to their structure, are proved to be gynandrous, with two anthers; but still of a nature that brings them in contact with the *Campanulaceæ*, and not with the *Orchideæ*.

We know of no representation of the present species taken from the living plant. It was found by Sir Joseph Banks in New South Wales; afterwards by Mr. Brown in Van Diemen's Island. *Root* fibrous, perennial. *Leaves* radical, ambient, numerous, lanceolate-linear, denticulate. *Scape* central, a foot or more high, longer than the foliage, leafless, simple, round, about as thick as a straw of grass, as well as the inflorescence beset throughout with glandular hairs (something in the way of *DROSERA*.) *Racemes* spiked, upright, numerous; larger *bractes* ovate, concave, single; smaller nearer to the germen, double. *Cal.* superior, persistent, bilabiate parted; upper lip trifid, lower bifid. *Cor.* of a dim pink colour, monadelphous, tubular, by a half-contortion of the tube from facing the lower lip of the calyx, turned to face one side of the insterstice between the two lips: *tube* longer than the calyx, orifice beset by 4 small bifid teethlike lobules: *limb* quinquepartite, irregular, patent; 4 larger *segments* obovate, in pairs, one of each pair somewhat smaller; the fifth or *labellum* placed in front, separated by a deeper fissure, small, deflected below the divisions of the other four on one side of the interlabial cleft of the calyx, oblong, with two minute ascendent linear lobules one on each side its base, thickened and somewhat convex inwards at the disk. *Germen* obovate, brownish: *column* rising from the summit of this, linear, longer than the limb, reclined and bent with a double curve, protruding from the corolla thro' the gap left by the depression of the labellum, but upon the slightest excitement beneath the outermost curve, passing with a sudden spring to the opposite side of the flower, hanging over the limb with the stigma pointing downwards. An endowment apparently given to preserve the parts intrusted to its care from being injured by insects, previous to the completion of the purpose for which they have been designed. *Anthers* two, yellow, incumbent on the plane of the stigma which crowns the shaft of the column, two-lobed, lobes from vertical diverging divaricately. *Stigma* green, obtuse,

entire; at first imperceptible and concealed by the superincumbent anthers; upon their disruption developing itself by increase of bulk, prominence, and supervening pubescence. *Capsule* obovate, bilocular, pubescent, opening vertically; *seeds* numerous, small, roundish, fixed at the axis of a partition parallel with the valves.

Introduced by Mr. P. Good in 1803. A greenhouse plant, flowering most part of the summer. The drawing was made last year at the nursery of Messrs. Lee and Kennedy, Hammersmith, the only place where we have met with the species.

a Three bractes of two kinds. *b* The germen. *c* The calyx. *d* The labellum or fifth segment of the limb of the corolla. *e* One of the two small linear appendices at its base. *f* The shaft of the column. *g* The stigma and incumbent anthers, *h* The bifid teethlike lobules that line the orifice of the tube. *i* The stigma, after the anthers have exploded: magnified.

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NOTES.

JASMINUM hirsutum. See article 15.

The figure of this having been taken from a plant during the winter, the bloom was not expanded to perfection. Hence the corolla has a concave obtuse form and a contracted mien, which do not belong to it in the summer. In that season the bloom is convex, acuminate, and of a much broader appearance; and the new foliage is then more conspicuously pubescent than the old.

GAZANIA pavonia. See article 35.

The plant spoken of as a hybrid production between the above species and *GAZANIA rigens*, towards the end of the article we have quoted, we find has been figured and described by Willdenow, in his *Hortus Berolinensis* (p. 97. t. 97), as a distinct species, by the name of *GORTERIA heterophylla*. It may be so; but we are inclined to think it a mule production.

Article 70. line 5. of the english text, For "Its mode of growth is similar to" read "In mode of growth it is similar to."

ERRATA.

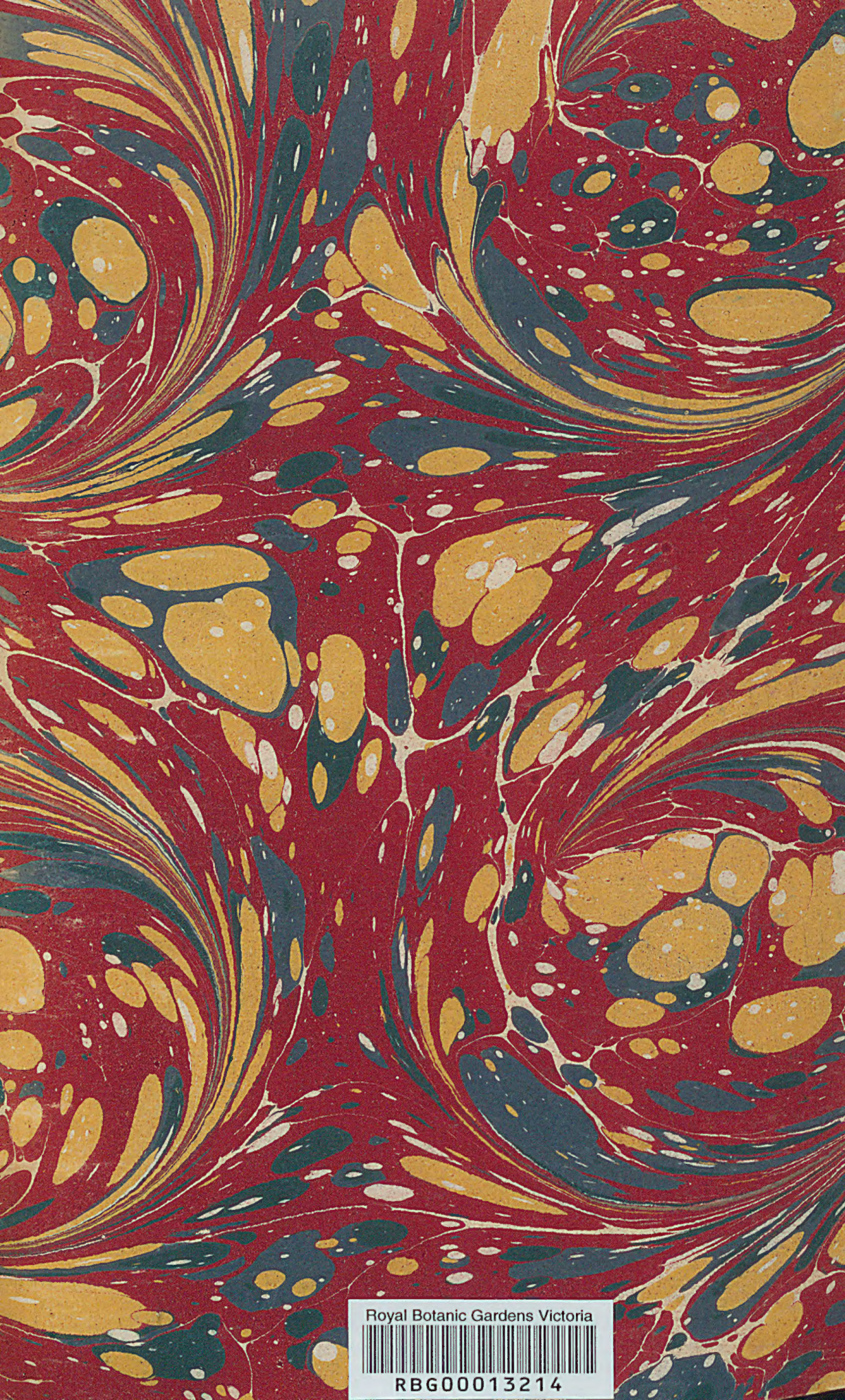
Leaf. line.

- Fol. 3. l. 17. For "*Peyrouse*" read "*Pérouse*."
- Fol. 7. l. 14. Pro "*C. volubilis*" lege "*C. incisa, volubilis*."
- Fol. 13. l. 26. Post "*Amæn.*" pone "*acad.*"
- Fol. 20. l. 15 a calce pag. 1. Pro "*uncias*" lege "*uncia*."
- Fol. 21. l. 17. Pro "*pl.*" lege "*pfl.*"
- Fol. 23. l. 14 a calce pag. 1. Pro "*ochroleuco*" lege "*chloroleuco*."
- Fol. 32. l. 9 a calce pag. 1. Pro "*cnetraliores*" lege "*centraliores*."
- Fol. 32 verso. l. 23. For "*Boërhave*" read "*Boërhaave*."
- Fol. 34. 2d page, l. 12 from bottom. For "*flower*" read "*flowers*."
- Fol. 43. l. 4 a calce pag. 1. Pro "*ex limbo*" lege "*à pede limbi rata*."
- Fol. 49. 2d page, l. 4. For "*Lunaria*" put "*LUNARIA*."
- Fol. 51. l. 15 a calce pag. 1. Pro "*interiores*" lege "*exteriores*."
- Fol. 53. l. 16 a calce pag. 1. Pro "*Böerh*" lege "*Boërh*."
- Fol. 53. 2d page, l. 8 from bottom. For "*Common Rose*" read "*the Common Provins Rose*."
- Fol. 59. l. 14 a calce pag. 1. Pro "*operculo incompleto*" lege "*septo v. dissepimento*."
- Fol. 59. 2d page, l. 2. from bottom. For "*incomplete operculum or cover*" read "*partition or dissepiment*."
- Fol. 63. 2d page, l. 14 from bottom. For "*its being*" read "*the plant's being*."
- Fol. 67. l. 9. Pro "*ovarium*" lege "*germen*."
- Fol. 70. l. 5. Pro "*Lonicera*" pone "*LONICERA*."

THE END OF VOL. I.

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